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THE NEW GÖTTERDÄMMERUNG¹

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PHILOSOPHY is keenly interested in the new cosmological theories. For, whatever view we take of the nature of ultimate reality, the world in space and time is an appearance of that reality, and must bear some relation to it. That the discoveries of Copernicus and Darwin have deeply influenced both philosophy and religion is universally admitted. Many think that Einstein and his colleagues may produce a revolution not less momentous.

There are, however, great difficulties for the philosophical student of the new astronomy and physics. In the first place, there is clearly no finality about the novel theories, which jostle one another in a manner which indicates that very little has been really settled. And secondly, the thinker is very soon faced with the old antinomies about infinite space and infinite time, in which a mathematician is as helpless as anyone else. The expedient of mixing the two into a "continuum of space-time" has, in my opinion, only made confusion worse confounded. The two will only mix either when time has been violently spatialized, as it is by Sir James Jeans in *Philosophy* for January this year, or when space has been spirited away to make way for a reality consisting only of "real time," which is the creed of the Bergsonians.

Our great astronomers, Eddington and Jeans, have been rather roughly handled by metaphysical pundits. Sir Arthur was severely criticized by Mr. Joseph in the *Hibbert Journal*, and I think he and Sir James are likely to fare worse if they evacuate the field of concrete reality and take refuge in pure mentalism. This, however, is one of the topics with which I hope to deal later in this article.

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One of the strangest things in nineteenth-century thought is the neglect of the "principle of Carnot," which in this country is generally called the Second Law of Thermodynamics, or, more shortly, Entropy, which was already known and accepted at the time when Herbert Spencer, Charles Darwin himself, and a host of others, were indulging in exultant pæans about the ineluctable law of progress, which was destined, beyond a peradventure, to lead the human race onward and upward to a condition of absolute perfection. This was the lay religion of enlightened persons in the reign of Queen Victoria. It infected philosophy very deeply. To this day it seems to be the foundation of the philosophy of Croce. Its effect upon religion was devastating. God became the vital principle of an eternally progressing universe. Whether he first attained self-consciousness at Berlin in the time of Hegel, as enemies of that philosopher rather unfairly aver that he asserted, or whether, with Professor Alexander, he is the evermore about to be, the to-morrow that never comes, it was commonly assumed that he is organic with his world, existing only as its soul, and of course condemned to share its fate.

Quite apart from Entropy, this picture was ludicrously untrue. Herbert Spencer, heaven knows why, identified progress with increasing complexity. Man, the roof and crown of things, is becoming more complex, and therefore "higher." He will go on getting more complex, and therefore more sublime, to all eternity. But some of nature's most successful experiments (by the survival test, the only one that Darwinism has any right to use) have, on the contrary, become more simple. They have shed their unnecessary organs, retaining only those which enable them to hang on and suck. Some of the most successful human types, the idle rich, the politicians, the State paupers, obviously belong to this class.

But Entropy, to give it its shortest name, had already rung the death-knell of these fantastic hopes. We have a long lease, it is true; but the end is certain. The race will die, and no memory of its history will survive anywhere. The form of the doctrine has no doubt varied. We used to be told that all the ponderable matter in the universe would be collected in a cold, dead ball. Now it is to disappear in radiation. But these are details. The doctrine in all its forms preached an absolute dysteleology, a final stultification of human hopes, at the time when "the century of hope" was getting drunk on draughts of extravagant optimism.

The probable explanation of this contradiction is that the laws of physics were supposed not to apply to living creatures, or only to some living creatures and not to man. By the side of the degradation of energy there was another law, tending in the upward direction. This claim, which I propose to call biologism, is still confidently

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made. It is supposed to justify a teleological view of the world. Inanimate nature was created as a vehicle for life, mind, and spirit. This is what most of us would like to believe; but it is easy to understand how unacceptable it is to the physicist. It introduces a most intractable dualism into the order of nature, and seems to demand a sharp separation between animate and inanimate entities, a separation which few, I suppose, in our day would be found to maintain with any confidence. Besides this, in the world as known to the astronomer and physicist, life holds such a small, precarious, and apparently almost accidental place that it is not easy to suppose that the laws of organic evolution are a fundamental cosmic principle. That the law of entropy, assuming it to be true, will be suspended for the sake of a few living and conscious creatures, scattered very sparsely over the boundless depths of space, is not an easy thing to believe.

But the Second Law is, or ought to be, almost as unwelcome to the physicist as to the biologist. Sir James Jeans tells us that the author of the universe is a mathematician. But in mathematics every process is theoretically reversible; we may, if we are clever enough, work a problem backwards as well as forwards. An able critic has said that "Time has no place in pure mathematics." Entropy, however, is unilinear and irreversible. Time's arrow, as Sir Arthur Eddington puts it, points always in one direction. Entropy therefore makes a big hole in a mathematical universe. It requires us to believe that the world had a beginning at a date which we could name if we knew it, and that it will have an end at an equally definite date. If this is true, the most natural conclusion is that it was made "out of nothing" by an external Creator, who will also authorize its final disappearance. The fact of a creation in time is really assumed in many of the newest scientific books, but the notion of a creation by an arbitrary *fiat* of the Deity is very unwelcome to almost all scientists. Their attempts to escape from the impasse are curious.

Some of them have virtually gone back to the theory of the ancient atomists, that the world began with a fortuitous concourse of atoms. Of course this leaves the origin of the atoms unexplained and inexplicable. But it is suggested that if the shuffling proceeded from all eternity, sooner or later (but in this case why later rather than sooner?) a cosmos must result, a cosmos, however, arranged in an extremely "improbable" manner; that, namely, at which a degradation of energy might begin. It is, however, quite impossible to fit a temporal sequence, with beginning, middle, and end, into an eternal scheme. The device explains nothing—neither the eternal atoms nor the reason why they assembled in this "improbable" manner at a particular date.

The difficulty is certainly not less when we contemplate the end of the process. Jeans and Eddington speak of the "annihilation" of matter. They probably use the word very incorrectly, since radiation is not "nothing." But taking them at their word, they say that a time will come when space will be entirely empty. At the same moment "Time's arrow will cease to point"; in other words, time will be empty too. We can think of empty space, but I defy anyone to think of empty time. The end, therefore, is absolute acosmism or pannihilism. And this, it must be remembered, will occur at a definite date in the future, after which nothing can happen any more.

This misuse of "annihilation" is not the only instance in which the astronomers seem to throw unnecessary difficulties in our way. When they speak of "the expansion of space" or "the expansion of the universe," they are surely using both words in an unfamiliar sense. What they seem to mean is that the circumference of the sphere which encloses all the ponderable matter of the universe is moving further from its centre; in other words, that matter is encroaching upon the surrounding vacuum. If it is answered that this objection depends on Euclidean geometry, may it not be said that this expansion is stated in Euclidean terms? I am sure there must be an answer to so obvious an objection, but I do not think it is altogether my fault not to have seen it. That clever but disrespectful writer, Harvey Wickham, says that if Einstein supposes that nobody could jump off his sphere, he cannot know much about fleas.

Can we really overcome this difficulty by speaking of the "space-time continuum"? I turn to the article by Sir James Jeans in the January number of this Review. "At first Einstein thought that the closing up of the universe was like a cylinder, so that in one direction there was no closing up at all. This one direction he identified with time, so that space became finite while time remained infinite. Recent work by Lemaître and others suggests that the cylinder must be replaced by a cone or horn-shaped surface, with time for the open axis. Space is still finite, but it for ever expands as time advances. Time has a beginning in the past, but there is no end in the future, time running steadily on to eternity, with the spatial universe expanding all the time."

Is it not clear that in order to bring time into the "horn" it has been completely spatialized? In this guise it is a string with only one end, an utterly impossible conception. Moreover, since the matter in the universe is finite, how can it go on expanding "to eternity"? And lastly, what of Entropy, which does not give Einstein eternity to play with? Perhaps these questions would cease to puzzle me if I were a great mathematician, but being what I am I can see no answers to them.

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Within the last few days I have learned from Professor Piaggio of Nottingham, to whose kindness I am much indebted, that Einstein last year abandoned his theory of a "universe" expanding to all eternity, and substituted for it the theory that the ponderable matter in the universe alternately expands and contracts. This is a really revolutionary change, for it means a return to the old theory of cosmic cycles, which I have believed ever since I began to study the Greeks. Our astronomers tell us that it is utterly impossible; but henceforth I shall take refuge behind Einstein. If it is true, the universe may be perpetual, as its Creator is eternal; and there must be some at present unknown agency which counterbalances the dissipation of energy.

It is well known that this assumption of a compensating force in nature, recombining the "annihilated" electrons and protons into atoms of hydrogen and helium, and so into the heavier atoms, is firmly believed by the American Millikan, who defended it to the British Association last year. I think the Swedish astronomer Arrhenius advocated a similar theory. To discuss this view would take me far out of my depth. Millikan does not seem to have made many converts to this theory of the origin and function of the cosmic rays; but a common-sense layman may suggest that if the universe is running down like a clock, the clock must have been wound up, and that whatever power wound it up once may presumably wind it up again. However that may be, this new theory of Einstein belongs to a different type of philosophy from his earlier one. Nothing could illustrate more clearly the bewildering state of cosmology as interpreted by the latest science.

How difficult the problem is may be gathered from the fact that Sir Arthur Eddington, with most commendable frankness, gives it up. He confesses that he can see no way out of the impasse. The Second Law of Thermodynamics is for him the most certain and fundamental of all the laws of nature, and yet it "labours under the disadvantage that it is incredible." He is unwilling to call in an external Creator, which to him and many others seems an *asylum ignorantiae*, and yet he can see no other solution.

Other suggestions have, however, been made. One is to say, Let us accept our doom. Even though our final extinction is certain, we have a very long lease of our home, long enough to satisfy reasonable people. Now of course we all know that we must die; and Christianity has always predicted the end of the world, usually believing that the end will not be deferred very long. Some non-Christian writers, like Lord Russell, have rather defiantly proclaimed that the spirit of man may rise above his fate, and may follow right because right is right, in scorn of consequence. His essay, *The Free Man's Worship*, is admirably written, and would be inspiring if it

left any room either for freedom or for worship. But other writers, like Lord Balfour and Professor Urban, have indignantly protested that to believe that a time will come when all the deeds and thoughts of man will be wiped out like a child's sand-castle by the incoming tide, and will be as if they had never been, is quite intolerable. It is intolerable, if modernist philosophy is true. If God is organic with the world, if the world is as necessary to God as God is to the world, and if increasing Entropy must pursue its course till all is destroyed, then God must die; and a God under sentence of death is no God. Professor Pringle Pattison says that philosophers have ceased to worry about Entropy. If they have, they are wrong, assuming that, like the late Professor, they are religious men; for the God of pantheism cannot survive this Scandinavian Ragnarök. The dilemma brings to a head the difference between theism and pantheism. The withers of the Christian are unwrung; but the God of Hegel and of modernist philosophy, it seems to me, has received a knock-out blow.

But Sir Arthur Eddington is not quite content to give it up, and he inclines to the same expedient which has been worked out by Sir James Jeans—namely, the resort to a philosophical theory of pure mentalism. In the article already referred to, Sir James says that "the secret of nature has yielded to the mathematical line of attack." It has won a success "such as is not shown by the æsthetic, poetic, or moral pictures of the universe." If he means that the way to make a true picture of the universe is to abstract from all the higher values, and treat them as non-existent, we can only regret that he accepts such a fatal impoverishment of experience; but I can hardly think that this is his meaning. However, he leaves us in no doubt of his acceptance of pure mentalism. "The picture is one from which everything has dropped out except purely mental concepts. One physical concept after another has been abandoned, until nothing is left but an array of events in the four-dimensional continuum. Nothing seems to possess any reality different from that of a mere mental concept."

It is this position which I wish to examine. My contention is that though pure mathematics is gloriously independent of concrete fact, physics and astronomy are not and cannot be. Further, that when the contradictions are in the mind itself, as when the properties peculiar to space and to time are confounded, and when a theory like Entropy, which postulates real time, is introduced into a mathematical scheme in which real time has no place, mentalism is no refuge.

But mainly I wish, with all possible respect, to deny that any investigation of the facts of nature, as they are given to us by perception, can logically end in pure mentalism. I maintain that science is fundamentally ontological. It starts with naïve realism

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or common-sense philosophy. It assumes that the objects which it studies are real. Very soon it is carried far away from naïve realism. It analyses, let us say, a drop of water into H_2O . Then it further analyses the atoms of these two elements into electrons and protons, and finally contemplates the possibility that the positive and negative units of electricity may cancel each other. Matter has certainly been defecated to a transparency; there is next to nothing left of it. Next to nothing—but “the little more and how much it is.” First of all, the dog wags his tail; then the tail wags the dog; then the dog is removed; then the tail; only the wag is left. This last step, I maintain, is illegitimate. From a concrete object, however attenuated, to a purely mental concept, there is no road. If the mathematical scientist adopts the opposite course, and tries to reconstruct a world of concrete fact out of pure concepts, he is taking the same *salto mortale* in the reverse direction. This is, of course, what Hegel was accused of doing, with a somewhat lordly indifference to concrete observations—the last accusation which could be brought against our scientists. It may be a valid defence to say that as human reason is one, and as nature is one, idealism and realism do not contradict each other. But this argument leads not to pure mentalism, but to the *adaequatio intellectus et rei* of an older philosophy.

The essentially ontological character of science, which it can never shake off, has been maintained, I think with great cogency, by Meyerson, in his admirable *L'Explication dans les Sciences*. The work of this septuagenarian philosopher has not, it seems to me, received nearly so much recognition as it deserves. Meyerson also lays great stress on what he rather unfortunately calls “the irrational” in science. By this word he means only the irreducible, brute fact which must be accepted as given. That there are many such facts in nature seems to me indisputable, and I do not see how room can be found for them in a universe of pure mathematical concepts.

These are the main difficulties which I find in considering the philosophical implications of the latest science. Within the sacred precincts of the higher mathematics I am quite incompetent to enter; but some at least of the objections which I have raised seem to belong to a field with which I am more familiar. I have not mentioned the polemic against Time-philosophies which we find in Bradley and Bosanquet. An acceptance of their views, which are almost ultra-Platonic, would perhaps facilitate such a pan-mathematicism as that of Sir James Jeans. Plato himself is blamed, in an ancient marginal note, for “mis-mathematicizing nature” (κατεμαθηματικεύσατο τὴν φύσιν). But this reduction of time to mere appearance would not fit in with the “space-time continuum”; time

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could only retain its status, if at all, by being spatialized in the way which we have found unacceptable. And however little we may be prepared to follow William James and Bergson, the time-process has too much solid reality to be ignored with impunity. We do not want a world in which nothing ever really happens.

My own conviction is that we must accept fully the transcendence of the Creator, who is not organic with His world. The creation is an expression and revelation of God's character, not an essential factor in His existence. I prefer to believe that there never was a time when the world was not, and that there never will be when the world will not be. This has been the belief of some Christian thinkers, such as Origen; and Thomas Aquinas says frankly that this would be his belief, if there had not been a revelation that the world was created in time. (*Mundum incepisse sola fide tenetur.*) I believe this because the perpetuity of creation seems to be the best reflection of the eternity of the Creator, and because, as I have said before, empty time is unthinkable. (Augustine, in a well-known passage, says that time and the world were created together.) The real world I believe to be an eternal and changeless kingdom of Values, the attributes of God and the home of immortal spirits. In that world we find our own immortality; the world of time and place is, as Plato says, a moving image of spiritual reality. Time and space are as real as the world in which we mostly live; they are the framework of life on the psychic plane.

I reject Tennyson's belief that "one increasing purpose runs" through the cosmic process. (I do not know what an "increasing purpose" means!) I believe that there is an infinite number of finite purposes, some of them interlinked, others entirely independent of each other. There can hardly be any connection between the life of humanity on this planet and that of other species who may now be living, or who may have lived, or be about to live, on planets a million light-years away. For the same reason, I see nothing to object to in the supposition that our present world-order may pass away (not, of course, from the consciousness of the Omniscient), and that other world-orders may follow it in a succession to which we can assign no terminus. The question as to the fate of the galactic system is not, I think, of vital importance either for religion or for philosophy, at least not to adherents of Christianity and the *philosophia perennis*; and when we think of the apparently insoluble antinomies arising out of the idea of infinity, whether of space or time, we may doubt whether science will ever give us a closed system with no ragged edges. The higher values are supraspatial and supratemporal, but they are just as much given to us as the objects of perception. It may be that any scheme which leaves them out, as natural science is obliged to leave them out, reveals its

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inadequacy by insoluble dilemmas; the system cannot be made quite watertight. My own opinion is that the *philosophia perennis*, even in the scholastic form which is now so unpopular, is far more satisfactory than the New Realisms and New Idealisms which, as Bosanquet says, have formed a kind of coalition against it; and I do not think that there is any necessary contradiction between this view of reality and the new theories or discoveries.

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AN ALTERNATIVE SCHEME TO THAT OF SIR JAMES JEANS

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IN the January number of the quarterly journal published by The British Institute of Philosophy, called *Philosophy*, Sir James Jeans with extraordinary ability has represented the view of the universe which may be held now in the twentieth century by a mathematician, and concludes that this representation contributes to and upholds an idealistic philosophy. Now with the contention that an idealistic philosophy is superior to any other, that is to say nearer the truth, we may be allowed to sympathize. Several physicists, even in the nineteenth century, were inclined to sustain the essence of Berkeley's view, or to consider that metaphysical truth must lie somewhere in that direction. G. F. FitzGerald, for instance, was notably of that opinion. But he was not prepared on that account to abandon the physical view of existence, and to take refuge in mere mathematical abstractions.

The mathematical method has a surprising power of making deductions about the result of any given activity; but when called upon to elaborate the actual details of the process, and construct a visible picture of how things interact, and trace in detail the course of their activities, it conspicuously fails. This failure is recognized by the mathematicians themselves. They know that their symbols can represent a number of different things, and that their equations can be correspondingly interpreted in various ways; but they do not find it necessary to interpret them at every stage of the process; nor need the mathematical transformation have any resemblance to the actuality of intermediate stages. Mathematicians can arrive at a result without forming a mental image or model of what is really happening; and so long as they attain a result which is intelligible, both at the beginning and at the end, they are satisfied. They have no need to follow the working; they go so far as to say that those who, in order to make a clear mental image of a physical process, postulate a mechanism not accessible to the senses and try to understand its actual working, are out of date and are left behind. Sir James Jeans seems to reject anything that the senses are incompetent to display, saying for instance:—

"The assumption that things existed which could not be perceived had led them into a whole morass of inconsistencies

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and impossibilities. The new policy was not adopted of set purpose or choice, but rather by a process of exhaustion. Those who did not adopt it were simply left behind, and the torch of knowledge was carried onward by those who did."

Yet it must be admitted that nearly all our progress in physical science up to the year 1900 was made by men who adopted this very procedure. It is one thing to say that mechanism is not a complete explanation, or that it is difficult to follow; it is quite another to sweep it all away and say that there is no mechanism at all, that we must give up the idea of making a vivid picture of what is happening, and must content ourselves with abstractions, or what are called "mental concepts." I should hesitate myself to call them mental concepts unless they can be conceived: and I do not perceive that any serious effort is made to conceive them. I should prefer to call them inconceivable or unconceived mathematical abstractions.

The old leaders were as well versed in mathematical methods as is the New School. The nineteenth century contained such men as Tait and Thomson, Stokes, Clerk Maxwell, Helmholtz, and many others. But they were not satisfied with the mere working out of their equations; they did not regard that as a complete statement of fact; they endeavoured to form a mental image or model of the working, and were thus led, not only to final results, but to some partial understanding or partial misunderstanding of the process by which they were achieved. In following this method they had, it is true, to postulate or infer the existence of entities which did not appeal to the senses, the laws of which therefore they could not explore experimentally, but which nevertheless they hoped to ascertain by further study as knowledge increased.

This utilization of hypothetical agencies whose existence was inferred by means other than direct sense apprehension, was begun, or at any rate adopted (mainly in tentative or interrogative form), by Newton, and was continued with various modifications down to the twentieth century. It was not considered a disadvantage, at any rate not a serious one, that these things could not be actually perceived in themselves; they were perceived by their material activities, by the way in which their supposed activity operated on a material body. It was not considered necessary to put them out of court or deny their existence, merely because, like the corpuscular particles of light, they were directly inapprehensible. The whole doctrine of lines of force in space was of this nature, and formed the basis of the physical philosophy of Faraday and Clerk Maxwell. One effect of the lines could be displayed, in the case of magnetism, by iron filings; but the cutting of physical lines of force, as a means

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of expounding quantitatively the induction of currents, was a device only justified by results. The idea of a gravitational or an electrical field had no other justification. But that was not considered as a fact hostile to the existence of such fields; for there are many other things active in the universe which make no direct appeal to the senses.

Experience shows that some material bodies are animated, but the animation is only inferred from the behaviour of the material body itself. The nature of life is unknown; we only experiment on animated organisms, that is on the material machinery worked by life; but few of us are willing on that account to deny that life exists. There is indeed a School of biologists, who would seem to be approved by Sir James Jeans, who agree with him that the only proper object of study is the *behaviour* of organisms as displayed to us through our senses, and that all else is wasteful or meaningless hypothesis.

Twentieth-century science, according to Jeans, having become aware of a space-time continuum—though how it became aware of such an abstraction by means other than hypothetical interpretation and inference is not obvious—shirks an attempt to draw a concrete picture of this continuum; but “under the guidance of Poincaré, Einstein, and Heisenberg,” it apparently came to recognize that in science the

“only proper objects of study were the sensations that the objects of the external universe produced on our senses.”

Rather an amazing and solipsistic statement, this, if pressed: it might be true for psychology. I fancy it may be a slip of the pen,—if so I do not press it,—for we surely try to study the things responsible for our sensations rather than the sensations themselves. How else can we gain a knowledge of an external world? But then, Jeans goes on,—

“The dictum *esse est percipi* was adopted wholeheartedly from philosophy—not because scientists had any predilections for an idealist philosophy, but because the assumption that things existed which could not be perceived had led them into a whole morass of inconsistencies and impossibilities.”

Well, that is a strong statement: especially if it be taken to imply that things not perceived, or at least not perceivable, do not exist. It would have very much surprised Professor Tait, not to mention Newton himself. Professor Tait, the centenary of whose birth we might have been celebrating last year along with the other centenaries, did not hesitate to postulate an “unseen universe,” that is a whole collection of existences which make no direct sensory appeal.

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But twentieth-century science apparently sweeps these away, one and all,

“not from choice, but from necessity. They had to be swept away, because their presence introduced confusion and inconsistency into the scientific picture of the world.”

But it may be contended that the sweeping away is not improving matters: we are left with no picture at all! Denial of everything that cannot be directly perceived by the senses seems to me unworthy of modern science: we cannot really be satisfied with mathematical abstractions alone, even if we call them mental concepts; nor need we limit the attention of science to things that affect the senses, still less to the sensations themselves!

THREE STAGES IN SCIENTIFIC HISTORY

The history of science is divided by Sir James Jeans into three periods, of very different lengths, which he calls respectively the animistic, the mechanical, and the mathematical. The first period lasted from the earliest ages up to Galileo and Newton: the second period from Galileo and Newton down to A.D. 1901; the third period is the portion of the twentieth century we have so far lived through.

Well, when we consider animated matter, I am not at all sure that we shall not have to find some truth even in the doctrines of the first period. In fact I might put it more strongly; for my attention has just been called to the Gifford Lectures of Professor Stout called “Mind and Matter,” in which he deals, on the whole favourably, with animistic views. However this may be, the second or materialistic period taught that

“inanimate nature appeared to behave as though its constituent pieces exerted pushes and pulls on one another, exactly similar to those we exert on them by the action of our muscles—it was in this way that the science of mechanics had its origin. Each piece of matter was supposed to exert a ‘force’ on every other piece. . . . The force which A exerted on B was equal in amount to that which B exerted on A. When the forces were gravitational or electrical, the bodies need not be in contact.”

(I should not express the facts precisely in this way, and will deal with the discrepancies directly.)

He then goes on to say that as knowledge increased, or

“as science began to wander farther from home, its inferences as to the nature of the assumed machinery became first confused, and then contradictory and absurd, until finally there

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was only one inference possible, namely, that the assumed machinery did not exist at all." The idea that objects pushed or pulled each other about "was as much an anthropomorphic error as the earlier animistic universe of our primitive ancestors,"

for in it the analogy of whims and caprices was replaced by the analogy of muscles and sinews. So, to evade the error, instead of searching for the mechanism elsewhere, the idea of "force" was abolished; and, still more drastically, "twentieth-century science, penetrating to the farthest depths of the universe, has swept away" every part of the machinery.

Now I know that this is the twentieth-century point of view, and I too hold that it is erroneous to contend that one piece of matter pushes or pulls another about; I know that there are many difficulties about the exertion of force by one piece of matter on another; at least so long as they are not animated, as in a football scrimmage. But there may be a way out, other than the mere abolition of what after all are manifest activities. Force, or rather stress, is a reality directly apprehended by our muscular sense. We experience it in a nut-cracker or a thumbscrew or a rack: we see it in the oscillations of a falling drop. The idea of force cannot be really replaced by acceleration, its effects are different, save when it is quite unimpeded or when the body acted on is small or rigid: and yet it is true that a material body *A* does not exert direct force on another material body *B*. Material bodies never really act on each other, for they never touch, and they cannot act at a distance. Newton knew they did not, and could not, when he promulgated the law of gravitation. What he really meant was that their motions could be investigated on the assumption that they were the same as if they did so act, particle by particle. The law of gravitation is a philosophy of "as if": so is Coulomb's Law.

In Jeans's statement quoted above (on page 141) about pieces of matter and the force they exert on each other, I accept his statement about what used to be said concerning exertion of force, but I wish to deny that directly acting bodies are "pieces of matter." I also deny the concluding sentence that when the forces are gravitational or electrical the acting bodies need not be in contact. I say, on the contrary, that things that exert force on each other directly must always be in contact, and that any force observed between two separate pieces of matter must be transmitted by something which is in contact with both. When a gun fires a shell, the gun has no direct action on the shell, although the momenta are equal and opposite: the cordite fires both in opposite directions. And its mass must be taken into consideration for accurate specification, unless it is either zero or infinite. There is always something between

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two pieces of matter, whether the gap be perceptible or not. When something called A really acts on something called B, one of them may be a piece of matter, but not both. If motion results, work is done, and the energy lost by A is gained by B. The energy lost by A may be kinetic: if so, the energy gained by B is potential, and represents a strain in the ether. On the other hand, when the converse operation takes place, the energy gained is kinetic. The energy is merely transferred, somewhat as in a commercial transaction "Capital" changes ownership, without loss or gain; until the act of purchase (or of work) is complete.¹

There is a constant interchange of energy between ether and matter: what one loses, the other gains. One of the acting bodies is always the ether. All potential energy is therein stored, in imperceptible fashion, until it can be made manifest again by being transferred in kinetic form to matter. The action may be instantaneous (or transmitted with the velocity of light), but the ether is an inevitable intermediary in every action between pieces of matter, whether it be perceptibly instantaneous, or whether it is obviously separated by space and time, as in a gravitational field. The existence of energy is continuous, and is just as real in the potential form as in the kinetic; only as it belongs to an entity which makes no appeal to the senses, its existency is not all the time conspicuous.

Unless the ether is mentally recognized, the idea of potential energy gives or ought to give some trouble. It has been sometimes called "possible energy," in contrast to actual energy, a nomenclature which really plays havoc with the law of conservation. Certainly the energy is in full existence all the time, and I believe will be found to have identity, the same kind of identity as is possessed by a piece of lost luggage; though it may not be so easy to recognize when it returns to our ken, nor is it so ready to be labelled. Yet everyone knows that our fires are liberating energy emitted by the sun of the carboniferous epoch, which, having arrived through the ether and been stored by vegetation, has been locked up quiescent for a vast number of millennia, and now at length is being restored to the ether as low-temperature radiation.²

¹ Economics can decide whether the purchase was justified: a transfer may be gratuitous, without adequate service rendered to anybody, as in gambling. So it can be also in physics; water can fall without achieving anything useful, and then there is waste, or increase of entropy. Energy which was tractable and therefore available, when possessed (as we call it) by high-level water, has been degraded into the unorganized and uncontrollable molecular motions of low-temperature heat.

² A little further elaboration may be necessary for cases of vibration. See Lodge's articles in *The Philosophical Magazine* for October 1879 and June 1881.

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Returning to the law of gravitation, and contemplating the motion of a planet or a projectile "attracted" by a central body, we know now, even if we didn't know before, that these "attractions" are due to something between or surrounding the bodies, something not sensed nor yet adequately conceived, which is warped by the neighbourhood of a large mass; or as Jeans says, the framework is twisted up, so that the path taken by a freely moving body becomes curved. "The framework" is his name for the space-time continuum in which everything occurs. The influence of a warp or curvature in space is felt by a material body as a force; and if the body is large there may be some deformation.

It appears to be a true doctrine that matter is inert and passive, never exerts force, or does anything else. Everything that happens is done to it. A leaf in the wind is a typical example. The wind itself is only displayed by its action on some form of matter: no one supposes that the kitten-like frolic of a dead leaf is inherent in itself. A piece of matter is perfectly inert, it always takes the path to which it is constrained—the path of least resistance. It never chooses its own path, whether of least action, or any other. How can a particle choose its path to a given destination? Can we suppose it guided by the future? How can light choose the point of impact on a mirror, so that its selected path shall be the shortest possible? The principle of Least Action is not an explanation or guiding principle, it is no law of guidance, it is a statement of fact; it gives no reason, it is a blindfold and interesting method of attaining a result, as the Conservation of Energy was in Helmholtz's brilliant paper of 1847. Applying the law of conservation, the intermediate steps of the process are ignored and unknown; a result is deduced, and is simply inevitable. That is the method of energy. It is a capital method in physics, but not one conducive to philosophical insight. Every idea of choice or self-determination applied to inanimate matter is obviously fanciful and figurative, though such language is often used in exposition. A particle cannot know, on setting out, which path is going to be the shortest or quickest or easiest. It cannot know what destination to aim at, nor by what route to travel. An inert thing must be guided instant by instant. The Wave Theory has long shown how the route of *radiation* is determined, and by what means it arrives at a focus. Every wave must arrive in the same phase, if they are to reinforce each other. Every bit of a wave-front thus builds up the next wave-front. The time of journey may be a maximum or a minimum. All that is necessary is that every portion shall take the same time, else they will arrive in discordant phases. Usually that condition is satisfied by a minimum; and so the principle of Least Action can be used to determine the path. So the path can be predicted, and it may look

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as if the thing moving knew what it was about. But note that the wave theory is not limited to ascertaining or determining the final result: it enables us to follow the process throughout. It gives a reason why the quickest path is the one taken. Radiation is guided by the very properties of a wave. No question of choice or foresight arises.

This mode of accounting for "least action" is admitted to be true for radiation. How comes it that particles behave similarly? What determines *their* route? Well, that is really a discovery of twentieth-century physics. Every particle is found to be accompanied by waves and is guided by them. Guidance in both cases is due to something etheric. The difference between a wave and a particle is getting partially obliterated. We have not yet heard the last of that curious discovery. It means that the behaviour even of a particle of matter cannot be understood without taking the ether into account. It may turn out that the very existence of matter will have to be explained in terms of the ether. The tables are sometimes turned in that way.

Modern Physics is very dogmatic, and it has much to be proud of, but it does not see all the way yet. Its defect is that it is too ready to be satisfied with foreseeing a result, and does not care to follow the details of a process, even though the process is essential to the attainment of a given result. How can a particle foresee and choose the path of least action? No answer can be given unless waves are introduced, and waves imply something that undulates; even if (with the late Lord Salisbury when presiding over the British Association at Oxford in 1894) we choose to call that something "a nominative case."

TRUTH OF MECHANISM

In contending against the self-sufficiency of mechanism, our enthusiastic leaders are too ready to sweep it all away, and to take refuge or to rejoice in formulæ and abstractions. Yet machinery there must be. Results are not obtained by rubbing a lamp or a ring, but by mechanism of some kind. This is true even for Creation; not only is mechanism necessary for attaining a result, duration is required too. The processes of evolution are slow and gradual; the element of Time is essential. Space will not do instead: Time and Space are essentially different. The ratio between them is not numerical but kinematic: it is a certain fundamental etheric velocity. Our study of machinery is not ultimate, it is not self-designed or self-acting, but the machinery is *there*, and no good purpose will be served by ignoring it or sweeping it away.

To summarize this portion: There is no real activity in matter:

all the activity lies in what it is the fashion now to call space-time, or what I prefer to call the ether; which therefore must have some structure, though the structure is not yet ascertained. The only force exerted upon a body is that which the ether exerts upon it. The ratio of resultant force to mass is acceleration. There is a universal contact action, with equal reaction: the action and reaction are not really between material bodies, but between one body and the ether in contact with it. In the case of gravitation, every particle of a large body is acted upon. When the force is greater per unit mass on some nearer particles than on others more distant, the body experiences tidal deformation.

That in general has been my philosophy since the seventies of last century. And it is at least an alternative to the sweeping away policy adopted in the twentieth century. The great mathematical physicists of the twentieth century didn't understand how the mechanism worked,—didn't understand any better than those of the nineteenth,—but they discovered that they could get results without attending to any mechanism, so they proposed to dispense with it altogether, and apply the blindfold but powerful method of mathematics. For inanimate matter this plan works, though it gives us no picture of the happenings; but for animated matter it fails. Every biologist and physiologist knows that an organism is full of complicated machinery: it is the action of the mechanism that they are studying, and usually they have no short cut to determine what the result will be. They are not tempted to sweep away the mechanism, as a mathematician is: their temptation is to sweep away the animation, to deny that life exists apart from matter. Their philosophy is apt to be materialistic. They really do try to study the objects of the external universe wholly through the senses, and to ignore anything that cannot be perceived. Many of them have found, however, that pursuing this far enough leads to difficulties, and is not conducive to clear conception or explanation. The self-will of an animal is puzzling: they can seldom predict what it is going to do. They try not to admit original or "purposive" action of any kind, yet purpose is forced upon them by observed facts. Both modern physicists and biologists therefore are liable to make the same kind of mistake; they are liable to ignore the thing in which the activity really resides. They are thus led to conclusions opposite in character but equally gratuitous. The biologist tries to think of mind as a function of matter, and to explain everything in terms of mechanism. The modern physicist ignores the mechanism, and having learnt that by mathematical reasoning he can attain results in the inorganic world without it, concludes that the universe is governed by mind. In that conclusion he may be correct. I say nothing against the idealistic philosophy. I sympathize with it. But

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I don't want to prop it up by false buttresses: it should be strong enough to stand on its own foundations.

Yet I would not have it supposed that I approve the motto *esse est percipi*, with the implied correlative *non percipi non esse*, as if everything that could not be either actually or potentially perceived was scientifically to be considered non-existent.¹ The policy of the clean sweep is very drastic, somewhat fashionable, but seldom justified. It is the policy of the builder who cuts down trees before erecting cottages: it simplifies his task, but it spoils the village. There are alternative policies. Mechanism need not be swept away, but by perceiving that the ether is the most essential part of it, it may gradually be understood. The properties and functions of the ether have still to be investigated. By this means physics and biology, which have drifted so far apart, can some day be brought together. The psychologist too can enter into his heritage; and the universe can be recognized as a complete whole, harmonious with the mind of man, who will not only anticipate part of its future course, but will be able to watch with a completer understanding every detail of the process. That is the sort of thing that can be attained by a really comprehensive knowledge: "the very hairs of your head are all numbered."

THE EVASION OF AN ETHER

With all deference to Sir James Jeans I want to contend that the Theory of Relativity does not abolish the ether. It only affects some of its imagined properties. An ether is still necessary, though it is not the ether of the nineteenth century: its constitution and properties have still to be made out. Apparently it cannot be moved, in the sense of locomotion: that is a function of matter. No one expects to "move" space: nor is what fills space subject to motion; it must behave as if it had infinite inertia. Ether is the seat of potential energy; it is the recipient of all strain; it alone exerts stress; it is the vehicle of an electric and a magnetic field as well as of all radiation. But in itself it is not like any other substance; nor is its behaviour applicable mechanically; (though whether some of it can be explained hydrodynamically remains to be seen). The motions, the accelerations, of inert matter are not intelligible without it. It is essential to all activity. I rebel against much of the philosophy of Mach, and often against the philosophy of Poincaré. I take refuge in the brilliant philosophy of Einstein, to whom, in conjunction with Professor Max Planck, we owe such generalizations as are

¹ That "the sycamore tree continues to be when there's no one about in the quad" must be true both for science and for metaphysics: hence I insert the word "potentially."

suggested by $w = h\nu$. Let me quote a longish passage from Professor Einstein's lecture on Ether and Relativity given in the University of Leyden in May 1920, and translated by Drs. Jeffery and Perrett as part of a book (published by Methuen) entitled *Sidelights on Relativity*:—

"There may be supposed to be extended physical objects to which the idea of motion cannot be applied. They may not be thought of as consisting of particles which allow themselves to be separately tracked through time. . . . The special theory of relativity forbids us to assume the ether to consist of particles observable through time, but the hypothesis of ether in itself is not in conflict with the special theory of relativity. Only we must be on our guard against ascribing a state of motion to the ether.

"Certainly, from the standpoint of the special theory of relativity, the ether hypothesis appears at first to be an empty hypothesis . . . but on the other hand there is a weighty argument to be adduced in favour of the ether hypothesis. To deny the ether is ultimately to assume that empty space has no physical qualities whatever. The fundamental facts of mechanics do not harmonize with this view. . . . Newton might no less well have called his absolute space 'Ether'; what is essential is merely that besides observable objects, another thing, which is not perceptible, must be looked upon as real, to enable acceleration or rotation to be looked upon as something real. . . .

"Therewith the conception of the ether has again acquired an intelligible content, although this content differs widely from that of the ether of the mechanical undulatory theory of light. The ether of the general theory of relativity is a medium which is itself devoid of *all* mechanical and kinematical qualities, but helps to determine mechanical (and electromagnetic) events. . . .

"As to the part which the new ether is to play in the physics of the future we are not yet clear. . . . We do not know whether it has an essential share in the structure of the electrical elementary particles constituting matter. . . .

"Recapitulating, we may say that according to the general theory of relativity space is endowed with physical qualities; in this sense, therefore, there exists an ether. According to the general theory of relativity space without ether is unthinkable."

Surely that is a striking statement, coming from Professor Einstein, who cannot be considered antiquated and out of date.

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EXPERIMENTS ON ETHER

One reason why modern physicists are unwilling to accept the ether or pay any attention to it, is because they seem to hold the doctrine that the only things worthy of attention are those which make appeal to the senses and can be experimented upon. It is commonly said that all experiments on the ether yield negative results, by which is meant that they fail to give any answer, except zero. Special stress is laid upon the Michelson-Morley experiment, in which the question was put to nature, at what rate is the earth moving through the ether? the test applied being to compare the time taken by the to-and-fro journey of a light-beam in different directions. This comparison, it was thought, was bound to give a very small positive answer, of the second order of magnitude. And when this answer came out unmistakably zero, all our ideas were perturbed and had to be overhauled. A compensating cause was suggested by G. F. FitzGerald, depending on the way that matter might behave if electrically constituted and in motion. But that this compensation should be exact, as Lorentz on electrical principles showed it would be, was considered too remarkable to be satisfactory: and there were talks of a conspiracy among the forces of nature to prevent absolute motion from being discovered. So people were glad to take refuge in the Theory of Relativity, which *postulated* that such a motion was meaningless, or in other words, that the experiment *must* fail,—as all similar experiments made directly on the ether had likewise failed.

But now I want to urge that perhaps we were not experimenting on the ether in the right way. We were aiming too directly at dealing with it. The ether does not appear to be a thing that we can directly deal with, it eludes our senses. There seems to be no way in which we can directly get hold of it. We have inferred its existence from the behaviour of matter, and that appears to be the right way to deal with the ether. Suppose we were trying to discover, by direct attack, any of the things that elude our senses, a gravitational or a magnetic field for instance, using ether waves as a test. Faraday's pertinacity was rewarded when dealing with a magnetic field, but the discovery was only made with the aid of a material body. The heavy glass in his experiment exercised a rotary action on a beam of light travelling along the magnetic lines of force inside the glass. With some substances the rotation was clockwise, in others it was counter-clockwise; so the effect observed was really an effect on a modification of ether inside matter, and was not made on free ether at all. In free ether the experiment fails.

Faraday also made experiments on a gravitational field, but these all failed. If he had been a modern physicist he might have said,

"Sweep away the gravitational field: no such thing effectively exists." And yet the influence of a gravitational field on matter is conspicuous. The behaviour of matter near the earth displays the existence of such a field in almost every movement, though the effort is now made to express these movements in geometrical terms, without appealing to force at all. I should prefer to say that the neighbourhood of a large mass of matter so modifies the ether that the easiest path for a particle to take is the curved path that is actually observed. And recently, through the genius of Einstein, it has been discovered that light also takes a curved path when passing through a very strong gravitational field. Thereby the gravitational potential has for the first time been directly observed; but extreme conditions were required before it could be displayed: no ordinary experimenting would have shown it. The entire mass of the sun had to be pressed into the service; and the light had to come from a very great distance. By exceptional experimenting such as that, the ether itself may possibly be constrained to yield an observable effect. We have failed so far, perhaps only because we have not pushed the experiments far enough. We have perhaps been hasty in postulating that such an experiment will always be impossible. There may be a slow circulation of ether in an exceptionally intense magnetic field. It could be looked for, as affecting the velocity of light slightly in free space. It would be a delicate and difficult experiment; and the result is uncertain, as in any real experiment it ought to be. It *might* require circularly polarized light.

Meanwhile, as in the case of gravitation, the most ordinary properties of matter display the action of the ether when rightly interpreted. Not only is it responsible for the curvature of the path of a projectile, and the weight of a block: we observe its powers also when we experience the strength of a rope, the stiffness of a rod, the elasticity of a spring. In all these and many other cases we are really face to face with the properties of ether. Cohesion is just as much due to etheric influence as gravitation is; molecules are held together by etheric links, and when the links are stretched, there is strain; but the strain is not in the matter. Matter itself is never strained, it is only moved; some portion of it is relatively altered in location, the strain thereby caused is in the connecting immaterial mechanism between the particles. Therein lies both the elasticity and the tenacity. The atoms of matter are separate individual particles, only welded together and held in position by etheric forces, either electric or magnetic or both. Whenever we wind up a clock we are really experimenting on the ether, whether the clock be driven by a weight or by a spring. We feel the ether quiver when we are toasting ourselves at a fire or basking in the sun. Less obviously, when a gas condenses to a liquid, it does so by reason of

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the cohesive forces between the molecules; and again the ether is responsible. Hence a shower of rain is an indirect demonstration of an activity of the ether. Without the ether there could be no liquefaction, and the material universe would be a heap of dust, or rather a peculiar kind of perfect gas. So when people say that all experiments on the ether fail, —that it makes no difference to us, and that it can therefore be wiped out of existence,—they only mean that we have failed so far in tackling it directly; whereas indirectly, through the properties of matter, that is by the interaction of material particles with it, its influence is among our most commonplace experiences.

An Engineer does not recognize this point of view; and the reason is plain. For him a girder or a tie-rod is not an assemblage of particles held together by a uniting mechanism, he does not thus analyse a block of matter, he treats it as a whole. He need not trouble to account for the fact of cohesion, nor need he ask himself what strain among the molecules is really like. There before him is a material body, with measurable elasticity, density, tenacity, and all its other properties. He need not account for those properties, he can just measure them. He need not worry about crystalline arrangement, until he found that its gradual genesis weakened his structures: he was content with a practical issue. Thus set free, an engineer could build bridges, cut through isthmuses, regulate the flow of rivers, construct magnificent engines, and do other wonderful work. So it may be long before he has to attend to the ether; unless indeed his business is telegraphy of some kind. But a physicist, especially a philosophical physicist, has to attend to the minutiae of atomic occurrences, and cannot be satisfied with the broad view rightly taken by the civil or mechanical engineer.

CONCLUSION

The behaviour of mechanism cannot be thoroughly understood in terms of matter alone. One particle of matter does not act directly on another. To have action you must have contact, and particles of matter are never in contact. If they ever get into contact, they cease to exist as matter, and turn into radiation. Their energy takes another form; from which apparently it finds a difficulty in escaping. Yet radiation can separate electrons from protons: a quantum of light can make an electron jump; and it may do other things, some of them perhaps not yet discovered.

Consider also ordinary locomotion. Locomotion of matter through ether is difficult to observe, even when it is moderately fast. Already motion is known to increase the mass of a moving body. Mass is admittedly a function of speed. How is that to be explained without

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taking the ether into account? What kind of locomotion can increase the mass of a body save absolute motion through space? and what sort of space can affect mass save one that has physical properties? Moreover when we combine two relative motions we find that to do so accurately, an ether-constant c must be introduced into the expression for the resultant speed. How can we account for that if we ignore the ether? We can express it blindfold in a mathematical formula, but we cannot give a physical interpretation unless we penetrate into the mechanism more deeply. If we attempt to explore the mechanism we may be led to further discoveries. On the other hand, if we ignore the mechanism, we are left stranded in the air, with no foothold in reality, nothing but what is called "a mental concept"; a strange term for something that we are unable to conceive.

Motion through the ether may be directly demonstrated some day, if we persist in looking for it. If we throw up the sponge prematurely and say that the whole idea is meaningless, we shall fail. When Faraday failed to find the effect of gravitational potential on light or electricity, he did not throw up the sponge and say it was impossible. He urged that further experiment should be made. Ultimately a minute effect on light was discovered; indeed more than one; but only by great skill, elaborate apparatus, and by aid of the vast masses dealt with in astronomy.

I would ask the great mathematical physicists of our time, whose achievements we all so much admire, to try to look at things from a different point of view, and admit that there is room for reasonable differences of opinion, and that in the present state of our knowledge, Philosophers have still some choice.

POETRY AND PROSE IN THE ARTS (II)

PROFESSOR S. ALEXANDER

IN THE OTHER ARTS

So far I have taken prose and poetry where admittedly they exist, in literature, and attempted to discover the difference between them by taking pieces of prose or poetry which have the same or much the same subjects and comparing them with one another. In all these pairs of passages I thought I could detect this difference: that in the poem the subject as rendered in words (for the poem is words and nothing else) acquires a life of its own, is a living thing, as it were, living its own life like an animal or plant, is organic, and, in a word, concrete. While the prose, for all its constructive unity, is not self-subsistent, but is descriptive of a given subject, even though that subject is itself created by the writer, as in a novel, and, in a word, is analytic. It is not the greater passion or vividness of the poem, for prose may be vivid, as in Carlyle, and passionate, as in Burke. It is that the poet places himself and places his hearer within the subject itself, and works from within outwards, while the prosaist describes relatively from without. Both of them describe, the poet as well as the prosaist. But the prosaist builds up his subject so as to bring it before your mind. The poet starts with his subject in its integrity, places the hearer's mind within it, and his exposition is the unfolding life of the subject itself.

This is the direct and obvious method of inquiry; and the provisional conclusion to be drawn from it. But there is another method¹ to which I now proceed which is not so much comparison of poetry and prose in literature, where the distinction clearly exists, as a comparative treatment of literature and the other arts. I wish to extend the range of the inquiry and to ask whether in them there is not the same difference of kind as in literature is called that of prose and poetry, so that there is prose and poetry in painting, music, and the rest; two species in each art which can only be called by the name used in literature. If such differing kinds can be detected, we shall have fresh light shed upon what the difference is between poetry and prose in literature. There is a certain strangeness in the method, for we have to establish the fact that these kinds can be distinguished, and at the same time ask whether they differ in the same way as prose and poetry proper do.

¹ The following was the basis of a lecture to the British Institute of Philosophy given in November 1931.

I observe first that, paradoxical as it may seem, to assert or suggest that there are prose and poetry in the other arts, the real paradox would be that this distinction should exist in literature alone of the fine arts, from the rest of which it is distinguished, it would seem, barely by the materials used in the arts—words, or pigments, etc.

Next I desire to make clear from the beginning that I do not mean that certain paintings (to speak of that art for example) are attended by or suggest literary poetic ideas, in the same way that they may be romantic or classical. On the contrary, the introduction of literary poetic motives into a picture spoils the picture by mixing the procedures of two different arts. A picture which is not poetic as a picture is not made so by telling, for instance, a poetic story which may be very good in literature. What I intend to ask is whether there are not two kinds of painting which differ from each other, as literary prose and poetry differ; and I hope to persuade you that there are.

Thirdly, I am proposing to consider only beautiful art (of course in its varying degrees of success, for perhaps no work of art is completely beautiful), and to neglect all that immense range of so-called art which is really purely imitative and is not fine art at all but skilful craft. As the greatest mass of prose writing is not literature, but merely good literary workmanship, so in the other arts a large portion of so-called works of art are works of skill, and no more art than a photograph is art. And this no more implies depreciation of such works in the other arts than it does in literature.

Further, in suggesting that there are poetry and prose in the other arts, I do not mean that all such poetry is superior to prose. Poetry is, indeed, the higher art for a reason that will be plainer as we proceed. But some prose may be and certainly is superior to some poetry. For greatness in art, as was before observed, depends not on the form only but on the subject, or what is often called by the un-English name of content. There are no degrees of beauty, except in the sense that works of art fall short of perfection in varying degrees. But there are degrees of greatness, and while poetry as such is greater than prose, some prose is greater than some poetry.

Finally, I have to ask for indulgence. The attempt to indicate the divergence of types in the several arts must necessarily be somewhat tedious, for it must take the arts one after the other and try to win attention or recognition for facts. And I labour under the special disadvantage of ignorance of, at least superficial acquaintance with, the arts. The best critic of art should be himself a practitioner in some one art. I am a practitioner in none, not even in literature, where I am content if I can attain to competent workmanship. But though I possess a fair acquaintance with literature in both its forms, I cannot pretend even to so much familiarity with the

products of the other arts. My task is rather to appeal to those who know, and to submit suggestions to their judgment. I am concerned to ask them whether they would agree to the distinctions which seem to me to exist, and then further to inquire, what perhaps falls with better justification within the range of a philosopher, whether I describe the difference correctly. In any case it must remain as difficult in the other arts to say of any particular work that it is prose or poetry as it may be in literature itself.

Architecture

The difference I am thinking of is most salient in architecture, with which I begin. Certain things I must take for granted without more than bare mention. We are concerned with beautiful architecture, and in architecture as in music beauty lies in the relations of the material of the art. In music it lies in the relations of tones; in architecture in the relations of line, enclosed volumes of space, and the mechanical stresses of the materials—stone or wood or brick, or whatever else—employed in the building. These arrangements of line and mass and space, which are the forms of house or church or shop, are the architectural meaning of the building, which meaning, therefore, does not lie in the other ideas which the building may convey. Thus, when Hegel declared that the Greek temple conveyed the ideas of finitude and limitation, such as are also embodied in the Olympian gods—human in kind, if superhuman, and each with its appointed office—while the Gothic cathedral embodied in its soaring pillars and pinnacles the infinitude appropriate to Christian conceptions of the divine, he was saying something perfectly true and, indeed, inspiring *about* these kinds of architecture, but the ideas were literary or historical or religious, and not constitutive of the architectural forms, but only suggested by them. The real difference between the Greek and the Gothic lay in the flat roof and sustaining columns of the one, and the vaulted roof with high shafts and walls supported by flying buttresses and pierced with windows for the light of the other. The ideas conveyed by beautiful architecture are architectural ideas, and not religious or literary ones; just as the ideas of beautiful music are musical ideas and not emotions. It remains true that as the habit of men's minds changes it will seek out for itself architectural forms consonant with itself. A conspicuous instance of this is the discovery of skyscraper architecture to suit the necessities of larger city population and greater concentration of business within a limited area.

All this being premised, let us take examples and contrast Salisbury Cathedral with Somerset House or even the Bush Building, or St. Mary Redclyffe at Bristol with the new University buildings there,

which are also Gothic and have been much influenced at least in details by the church. Salisbury Cathedral has, indeed, the added charm of its surroundings. Still every good building is adapted to its surroundings, as, for instance, the austere beautiful side of the Rylands Library at Manchester is adapted to the narrow lane which skirts it, and so contrasts markedly with the more florid façade to the broad street. The cathedral has the effect upon the mind, through its own architectural form, and not through ideas imported from religion or literature, of a thing with a life of its own, as if it were a plant or tree growing out of the ground, and its self-contained life culminating at the growing top in its single spire. (It is not an architectural idea that the spire points to heaven, but a literary one, as illustrated by Wordsworth in a well-known poem or in the phrase "a star-y-pointing pyramid"). Somerset House, on the other hand—I choose it as admittedly successful architecture—bears upon its face the purpose of its existence, the indication that its rows of windows are the windows of offices. It is so good because with all the revelation of its uses, its unity and organic character are maintained. It is prose because it is so manifestly a thing of parts and uses which are set out in their detail, while their coherence secures the indispensable unity of a beautiful design.

Now architecture, though so often likened to music, and indeed nearest to music of all the arts—the art essential to the bare physical existence of men nearest to the most purely formal art—differs from music in containing the representative element of use or utility. Music has no utility except a spiritual one; architecture has a material utility, like that of the subject-matter or story told in a painting. Now I suggest that in every beautiful building its uses, its representative elements, are indeed subsumed into the form, but also that in Salisbury or St. Mary Redclyffe, the building has an autonomous life, as if it were an animal or plant created to enjoy its own individuality, so that its uses flow from it and are not felt; while the other buildings are not self-contained but imply other things, *e.g.*, men, to which they are subservient in their uses. On the other hand, when the uses are obtrusive, the building ceases to be beautiful art, and is merely the skilful adaptation of materials to an end and is a work of craft, as is by far the greater number of our houses and other buildings. This difference, I suggest, is identical with, not merely like by a sort of analogy of metaphor, but identical with the difference already indicated by way of another approach as being that of poetry and prose in literature, and may therefore properly be called by the same name. Because architecture has its different uses, and is the form appropriate to that utility, it may either, as it were, live out its uses or display them. When it does the first it is concrete, individual, synthetic, and proceeds from within outwards. When it

does the second it is analytic and explanatory; but its parts, so long as it is beautiful, are held together within the unity of its design.

Other instances that occur to me are the beautiful prose of the now demolished Regent Crescent of Nash or of the Royal Crescent at Bath, and indeed a large part of the admirable house architecture of Bath, so singularly like in the general effect it produces to the excellent literary prose of the same century; as compared, say, with the poetry of several of Wren's churches or Inigo Jones's Hardwick Hall at Hucknall. Perhaps the difference may be verified in the new skyscrapers which are our modern substitutes for cathedral buildings. Some of them seem, from their drawings, for I have seen none of them in their reality, to be poems, such as the Tribune Tower at Chicago, others tell too clearly their story and are prose, according to the difference I have attempted to describe.

But in working out the distinction there are all sorts of difficulties. Partly we have to remember that, as with literature, there is never perfect beauty, but yet a building may be a poem and a more or less successful one, sometimes a poor poem, and still bearing the distinctive marks of poetry and not of prose. Sometimes, of course, it is bad, whether bad poetry or bad prose. Partly we must abandon the prejudice that poetry, however imperfect, is always superior to prose. The admirable prose of Somerset House may be superior to much architectural poetry. Sometimes the difference is patent; for example, the poetry of the inner court of the Royal College of Science, or the charming Renaissance Hospital at Milan, or the prose of the Adam buildings in London, or in the Edinburgh University building of the same artists.

But there are very different types of architecture, Greek, Gothic, or Romantic, and I beg to observe that the mark of poetry is not that of its romantic character, for it belongs to classic as much as to romantic architecture or other art. Again, as in literature there are different sorts of poetic prose form—epic, lyric, dramatic, narrative, oratorical, and the like—so there may be corresponding sorts of architecture, the difference, for instance, between Azay-le-Rideau and Chambord or Chenonceaux or the Louvre or Blois, or a building of Mansart. It may be very difficult to say which is prose and which poetry in particular cases. Thus to me the Pazzi Chapel at Florence seems to be poetry, as clearly as the Rucellai or Riccardi palace is prose. But I do not know what to say of the Farnese palace at Rome or the Strozzi palace at Florence. I know a porter's lodge in my own neighbourhood (at Ashburne Hall in Fallowfield) which I think to be poetry, and an eighteenth- or early nineteenth-century stone house at Calver in Derbyshire seemed to me more like poetry than prose. It is, again, not merely the presence of imagination which decides. Burke's prose, to repeat myself, is highly imaginative

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without being poetry. And I suppose that as in literature there are hybrid products which are not clearly poetry or prose. Moreover, as the skyscrapers show, it is not the particular purpose which decides; industrial architecture may be poetry. But all these matters must be left to the judgment of those who know, by whom I am content that the distinction which I have suggested and attempted to describe should be considered and approved or rejected. This remark applies equally to what I shall say about the other arts. I am rather asking a question than formulating a doctrine.

Painting

In painting I take as illustrations of the one kind the frescoes on the ceiling of the Sistine Chapel, Botticelli's Venus rising from the sea, or the Giorgione landscape belonging to Prince Giovanelli, which was shown in the Italian exhibition of last year, and contrast them with almost anything of Ghirlandajo, and in particular his frescoes of the history of the Virgin in Sta Maria Novella, or, since such pictures as his are at the lower limit of their kind and might by some be regarded as merely illustrative craftsmanship, with such a picture as the Veronese in the National Gallery of the meeting of Alexander and the family of Darius, or the same artist's Supper at Cana, or many a picture of the Dutch School.¹ I am assuming that these pictures which I name in the second place are good paintings and beautiful, and beautiful because, though they tell a story, which the others do not, the story is completely inspired by the form, or, to use expressions used already in respect of architecture, the ideas embodied in the pictures are pictorial ideas and not *merely* ideas suggested by the pictures. As a satisfactory example of this second class of pictures, I add the paintings of Hogarth, whose artistic or formal excellence is conceded. I do not know whether I should be justified in placing beside them the late Venetian pictures of Longhi or Guardi, more or less contemporary with his. And comparing these two kinds of paintings, I ask whether the first set may not be described as possessing a self-contained life, as if they were organisms created by the painter, so that it is not so much their subject which pleases as rather that their subject is forgotten in the enjoyment of their formal life, as we forget the lion's fierceness or the cat's subtlety in delight of the lissomeness of their bodies and the grace of their movements. The painter has conceived or felt in terms of line and colour and light or shade the subject from which he starts; and living its life from the inside has made it in its

¹ Or, I might add, the Daumier picture of the St. Lazare railway station, which is reproduced in Mr. Roger Fry's *Transformations*; or the other Daumiers which were shown in the recent French exhibition.

parts and incidents live again in the picture and for us. Whether, secondly, in the other instances the subject is not felt or conceived—still in terms of line and colour and illumination—from without, so that the picture depends not merely on itself but on the story which the spectator is told. If this is borne out, that the one set is concrete and synthetic and the other descriptive and analytic, we may justly call the one set poetry painting and the other prose painting, with the identical difference which is exhibited in literature.

Perhaps the difference may be illustrated most easily from portraiture. In general I suggest that Reynolds is a prose painter and Gainsborough a poetic one, and recall at the same time the proviso that to call a painting prose is not to depreciate it, for some prose painting is higher and greater than some poetic painting. And I do not suggest that Gainsborough, for all his poetry, can be compared with Leonardo, also a poet if ever there was one in painting. His poetry is rather that of grace and charm than of depth, like the literary poetry of his time. For the sake of bringing home the point I refer to a comment of Fromentin on the work of Rembrandt. Rembrandt was a great poet, whom it is far better so to describe than to call him by the obscure name of romantic. Velasquez was no romantic and yet was a pictorial poet; witness his portraits of the Infanta and Philip IV, to say nothing of the Venus with the Mirror. Now Fromentin says (in *Les Maîtres d'autrefois*) that there were two men in Rembrandt. One was the perfect artist, best illustrated by the portrait of the Burgomaster Jan Six or the earlier portraits in the *Anatomy Lesson*. The other was the Rembrandt seen under difficult conditions in the so-called *Night Watch*, and in his splendour in *The Supper of Emmaus*, or the portrait group of the *Syndics*. Fromentin thinks that, for all its perfection of style, the subject of the Burgomaster Six was not quite congenial, and the result is a masterpiece of painting, but external. While the figures of the *Syndics* live again. My suggestion is that Rembrandt in Six was for once painting perfect prose, perfect because there is nothing in the picture extraneous to the pigments, while nearly all his famous pictures are poems with varying degrees of success. His portraits are eminently pictorial poetry in the sense described; for instance the beautiful portraits of his son Titus, that of himself in our National Gallery, that of a young man in the Louvre (1651), or the lovely one of an old woman at Leningrad (1654). This is what is suggested to me by Fromentin's criticism, which I take to be that of an accomplished artist-critic, though it is, of course, not so put by the author himself.

Outside the two classes of pictures which are poems and prose, there is the whole vast range of illustrative painting in which the interest lies in the story itself that is told, and not as in prose

painting in the form or design which tells the story. Such painting does not belong to fine art, but is craft, though it may be very skilful craft. Its difference from true prose is that the ideas embodied are not pictorial, but belong to history or sentiment or religion. The pictures which alone Tolstoi would allow are religious lessons conveyed in pigments, and belong to education or edification, and not to art. The use of illustrative pictures is not in the least to be denied. So long as men are moved by recognition of what interests them, so long such pictures have their legitimate place, but they are not art. They are, of course, of the most different kinds, from really good illustrative work, through Leader's landscapes or Leighton's *Captivity of Andromache* (if this judgment of Leighton is not perhaps too harsh, and he is not rather to be regarded as an agreeable prose painter) down to photographs. Competent painting has its worth like competent writing. It is, however, below the rank of beautiful prose. Once more it is to be insisted that there is real poetry or prose in a painting which in some respects good of its kind is faulty or even bad; possibly Leighton's picture just mentioned is best described as poor poetry.

In thus distinguishing prose painting which is not autonomous but tells a story beautifully from illustration which tells a story well but not beautifully, we have been raising the question of the value of representative painting. All painting, it is safe to say, is representative. It has a subject which is to be distinguished from the pictorial form of the subject, though the form varies with the subject, and the subject becomes different with the slightest change of the form. So it is that the pictorial poem and prose about the same topic have a different content or subject in that sense. Any variation of treatment affects the subject represented. Its representative character distinguishes painting from music, or at least from pure music. It is true that the subject may be nothing but form, as in arabesques, in which case painting approaches most nearly to music. But this is a limiting case.

The name representative painting is, however, commonly applied to painting which tells a story, and it has fallen into suspicion of late years, at the hands of those who quite rightly insist that beauty lies in the form and not in the subject. This rejection of all representative painting and refusal to count it as beautiful has been modified very considerably in the later writing of Mr. Roger Fry. He acknowledges the claim of certain representative pictures to the title of fine art, but being still unprepared to consider it a branch of painting proper, proposes the view that in such painting, besides the art of painting proper, there is another art, that of representation, which is joined with it, as in opera singing and acting are added to music. This solution appears to me a violent one, which is the

outcome of the refusal to recognize the representative element in painting as such. It is, moreover, open to the difficulty that since there is representation in sculpture as well, we should have an art which works indifferently in pigments and in stone or other sculptural material; whereas each art, as we know the arts, has its distinctive material. In music there is primarily no representative element, but the material of music is the tones themselves and their relations. Whereas in painting the lines and colours essentially mean things, though beauty lies not in the things but wholly in the forms which convey things. But if I am right, representative painting in the special sense, when it is beautiful and there is no element left extraneous to the form; which tells a story not for the story's sake but for the beautiful form of it; is really painting, but it is a different form of painting. It is not a blend of painting with another art, but is prose painting. In this way a large body of beautiful paintings will be included in fine art, as it is by the common sense of mankind. I have learnt so much from Mr. Fry, and have so profound an admiration of his writings, that it is something like a relief to me to think that by recognizing much painting to be pictorial prose we are at once taking note of a difference of kinds in fine art and saving much beautiful work for what is indeed a lower place on the whole than pictorial poetry, but for a real and legitimate place.

Sculpture

Sculpture offers, to me at least, more difficulty in testing the distinction which appears to me to exist in the two arts discussed. Partly, it is that in the standard sculpture of Greece so little of the great period remains, except in later copies, and it is just in copies that the traces of the creative hand and chisel are apt to disappear. Partly, it is that the glamour of Greek sculpture of the best time disposes the spectator, at least the unskilled one, to find poetry in it everywhere. Yet there seems to be a clear difference in kind between the Theseus and the Horse of Selene from the Parthenon and, say, the admirable Pergamon frieze preserved at Berlin. I have no reason to doubt the story cited by Hegel that when the Pheidias statue of Athena Promachus was unveiled the Athenians shouted that that was Athena, not in the mere sense as I suppose that it was a speaking and moving likeness of their idea, but that it was the goddess herself in stone, filled with the Olympian majesty and life. The Pergamenean reliefs are a story told well, though with some rhetoric. Is the pan-athenaic procession in the frieze of the Parthenon more than prose sculpture? Much poetic feeling seems at first to hang about some of the lovely Athenian sepulchral stelæ. But apart from the charming domestic sentiment, which after all is

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domestic rather than sculptural, they are rather records than creations, unlike, for example, the poetry of the lovely relief of the girl bending to tie her sandal. We may remind ourselves that literary prose may be lovely too without being poetry—there are exquisite such passages in Pascal which do not rise above prose, as one may assure oneself by comparing them with many a passage of his contemporary Racine, where the barest language has the intrinsic and autonomous life of poetry. The Hermes of Praxiteles is undoubtedly a poem, but were the Niobids of the Uffizi, whose originals are attributed to his colleague Scopas, even when we allow for what they have lost in transcription, more than prose art, which possibly in their original form was more successful artistically? I venture with some trepidation upon ground made famous in the history of criticism by Lessing when I suggest that the Laocoön group is unfairly judged as sculpture in comparison with Virgil's poetry, and that it may claim to be rather good plastic prose than inartistic poetry. It has, indeed, been maintained (as against Lessing) that no subject but may lend itself to sculpture, and in face of the Ghiberti reliefs of the Baptistery door it is difficult to maintain the opposite. These seem to me to be poems, however much they violate the alleged rule that sculpture cannot depict a temporal incident. But a comparison of the competition plaques of Ghiberti and Brunelleschi on the sacrifice of Isaac indicates that the beautiful Brunelleschi plaque, if not exactly prose, was, at any rate, far less of a poem than Ghiberti's, which was preferred to it, because it lacks authentic life. No one can doubt that the Antinous figure belongs to a different kind from, say, the Zeus of Ottricoli or the Victory of Samothrace; and the great Augustus of the villa of Hadrian is also prose. The Ludovisi figures on the chair in the *Thermae* are, on the other hand, sheer poetry.

So in general are the Donatello statues as clearly poetry as the Campanile of Giotto or Giotto's own sculptures on it. To the class of poems belong the great singing groups of Donatello and of Luca. The real difficulty is to find sculpture from the great Florentine masters which is prose. If one steps from that great age to the present, I should feel little difficulty myself in referring Epstein's sculpture in general to the class of poetry, adding that where he is faulty it is not that he drops into prose and still less into mere illustration, but is imperfectly poetical. The "Rima" relief is a good instance of what I take to be the meaning of poetry in sculpture, incapable as I am of appraising its real defects. Defects seem to me more palpable in his *Genesis*, but they do not make it the less a poem, only the less completely or perfectly poetical. What I have seen of Mestrovic again is surely in the class which provisionally I call poetry, but Rodin's work I do not know well enough to be able to

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judge whether some or most of it, *e.g.* the burghers of Calais, is not really prose.

As in painting, there is a vast amount in sculpture of illustrative work which is neither prose nor poetry, but merely good (or bad) craftsmanship. The question which I wish to submit to fit judges is whether a great deal of really beautiful sculpture does not beautifully, that is artistically, tell a tale, like the pan-athenaic frieze, without restricting itself to such mere story-telling, but making the work descriptive in beautiful form and yet not piercing to the centre. The Augustus statue is a good instance. Are there not in our portrait busts besides the mere photographic ones, which do not count as art, and the real poems, such as perhaps the Pericles or the Niccolo da Uzzano in the Bargello many, like certain busts of Roman emperors, which are descriptive or analytic (like the Jan Six in painting) and yet beautiful? If I am right in these lame exemplifications, sculpture is also either poetry or prose, and for the same reasons.

Music

In Music there would seem to be a clear difference in kind between pure or absolute music and programme music, which has a subject that is not itself a musical idea. Here, as before, we may exclude from consideration a mass of so-called music which may be highly skilful technically, but serves an agreeable purpose, such as dancing or singing, and is at most not beautiful but pretty. But in separating two classes from one another of music which is fine art, as poetry and prose, there is, besides the difficulty in the application of the distinction to which I shall return presently, the theoretical difficulty, that there would seem to be no room for prose in music, because there is in music no element of representation. For the material of music is nothing but tones and their relations, and though these may suggest emotions or even definite subjects, it is not these which constitute the meaning of the tones. They mean themselves and nothing else. Whereas even architecture means, as we have seen, its uses; and painting and sculpture, except in their limiting cases of arabesque and the like, always have a subject, though that subject may in the limiting case be mere form. Pure music is in fact, according to the statement of Hanslick, an arabesque of tones.

The contrary opinion, that music is designed to express the emotions of the composer, arises partly from the immensely greater rôle of emotion in music than in the other arts, partly from the manifest emotional effect of all music, but partly from the mistaken belief that the aim of music, as of all other acts, is to express emotion, that is, in the main, the emotion of the artist. It would seem hazardous to demur to a proposition which is so widely accepted. Yet I venture

to say that no art endeavours to express the emotions of the artist in any more particular fashion than it expresses his conceptions or images or generally ideas; but that it endeavours to express not the artist at all but the subject-matter which he has chosen to embody in his material; and that the only emotion which he can really be said to express is the artistic emotion which drives him into production, and which is satisfied by the form of the work he produces. Furthermore, if art is supposed to express the personality of the artist, that proposition would not suffice to distinguish art from any other kind of action, which always proceeds from personality. The difference of art from other such expressions is not to be found in emotion but in the fusion of the artist with his subject-matter, which modifies that subject-matter and makes it something that it would not be except for the artist. These, however, are very general topics which it is impossible to pursue here, but are treated by myself elsewhere.

Music, then, does not exist in order to express emotion, though it proceeds from emotion, and also suggests emotion to its hearers. It is limited in its material to tones and their formal relations, which have no other intrinsic meaning. For this reason the other arts have been said by Pater to tend towards music when they are at their best. This is, indeed, another way of saying that all art, in so far as it is beautiful, derives its beauty from its form and not from its subject, and music has nothing but the form of its materials, and therefore exhibits the true nature of beauty most plainly. When the Abbé Bremont says that pure poetry culminates not so much in music as in prayer, he misses the real value of the other saying of Pater's, though at the same time he raises the difficult and absorbing question of how poetry and the other arts at their best, though human creations, put us into relation with the universe of reality, as we are by the ways of religion put into relation with that universe in prayer.

The introduction of a subject other than tonal would seem, then, to be blending music with another art and producing a mixed art like opera, as Mr. Fry proposes to say of representative painting. If we are still to count music with a subject, or programme music as prose, we must, I imagine, say that the subject by its emotional tone is identical with the emotional tone suggested by the music itself. In this way, though it implies some stretching of our theory, we may allow that representative music is a legitimate kind of music, though it has not the obvious legitimacy of prose painting or sculpture. Whether the fusion of music and subject is successful, it may be hard to say in particular cases. In many cases the problem is solved by what is practically a disregard of the words of a song or an opera, of which the best instance is the sheer poetry of the

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Magic Flute, where the senseless libretto does not count. Sometimes what may seem to some representative is not so at all. Everyone knows that Beethoven, who described a phrase as "Fate knocks at the door," said also that it was suggested to him by the sound of the woodpecker. It remained pure poetry. I do not know how far Strauss's musical setting of Hoffmannsthal's poetry left the music poetry or made it musical prose. But in many instances programme music is musical prose, and the only doubt remains whether it should be likened rather to hybrid poetic prose in literature or simply treated as musical prose. Sometimes it is difficult to say, because composers call their works by names. Significantly, Schumann is said to have given names to his songs not till after they were composed. Much confusion in painting and sculpture, as well as in music, would be avoided if the artists avoided giving names to their works, *e.g.* if Mr. Epstein had not called his poetry *Genesis*, and suggested mere literary interpretations of a work which is formal or at least has no value except in so far as it is successful formally.

I should take as pure examples of musical prose Berlioz's *Fantastic Symphony* and Elgar's *Falstaff*. I will not inquire which of the great classics are poetry and which are prose. More even than in the other arts, my acquaintance with music is too superficial. I am content to ask whether, for instance, quite apart from the relative greatness or splendour of the works, there is not a clear difference of kind between Handel's *Messiah*, or the greater part of it, and Bach's *Mass in B Minor*. The spontaneous and autonomous character is written on anything of Mozart or any song of Schubert. These are poetry. On the other hand, Tschaikovsky insisted for himself that he wrote his Fourth Symphony to a programme. It is for the musical judge to say whether that work does not bear a corresponding difference of character. There is no doubt of the poetry of Chopin or Brahms. What of Strauss? Is the *Eroica* symphony of Beethoven of the same musical kind as the Fifth Symphony? Again I repeat that prose is as much art as poetry, and some musical prose may be greater than some musical poetry. Nor is every musical composition necessarily poetry throughout. It may be fancy on the part of a tyro in music to suggest that a change from poetry to prose occurs when Beethoven introduces in the last movement of the Choral symphony not merely the voice which is only another musical instrument but a subject in words. Despite the splendour of the choral part, the change in character from the earlier movements is marked. And I must leave unanswered the question whether Wagner has always made musical poetry. The use of certain motifs suggests that the music has become representative. How far in such passages the composer has been better than his own theory and remained a poet, or how far he has merely succeeded in overcoming the duality of music and

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representation by effecting a fusion of them and so has written beautiful prose, I cannot dare to decide. I confess that large tracts of his music seem to me not poetry but prose, though splendid prose.¹ The deliberate use of motifs suggests at any rate that the composer is proceeding analytically and not as the bird sings. But a great composer may be a poet and still sometimes change over to prose, and with this particular composer it may be of interest to know which parts of his work are the one and which the other. Here, as before, I am content to put a question and ask for an answer from those who know.

CONCLUSION

It would seem, then, from this inquiry, which I am well aware has raised as many questions as it has answered, that there is in all the other arts a distinction of kinds which is identical with that of prose and poetry in literature, and therefore may fitly be called by the same name. The difference we have found to be in the one authentic original life, in the other unity, indeed, and organic connection, but description and analysis, the one concrete, the other not abstract but analytic. I do not think that the result is very different from Mr. Read's statement that poetry is creative expression, prose constructive expression. I am, of course, at one with him in finding the essence of the art in the medium itself, in the words or pigments or sounds, etc., "adequate," as he says, "to the thought involved." When he adds that poetry may inhere in a single word or two or three words, "incarnadine" or "incense-breathing morn," while prose exists only in the phrase, I think it possible that parallels may be found in painting, for example, or music, in the invention of a new palette or technique, as for example by the impressionists. But I do not feel sure, and in any case the mere group of words forming a name may be poetry because of their actual life as of a concrete organism. If I have spoken so much not of words or pigments, it is because I have taken for granted that it is these which are the work of art and their form its beauty. And more than once I have indicated that with these assumptions, kinds of art may be distinguished by their subject-matter or the treatment of it.

My demurrer to Mr. Read's statement is mainly that creativeness is an epithet of mystery (apt enough because of that strange magic about poetry), and suggests that nothing further can be said. Partly my reason is that constructiveness seems to me the essence of all art, whether prose or poetry. Elsewhere I have tried to find the ancestry of the sentiment of beauty in the constructiveness exhibited amongst animals, as in the nightingale's song or the beaver's architecture, and have suggested that such constructiveness becomes art when

¹ E.g., the Good Friday music in *Parsifal*.

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it has ceased to be practical, like the wooing song of the nightingale, and becomes purely contemplative. Poetry is the higher and more original art than prose just because it is nearer to the instinctive outpouring of song. Strangely enough, there is no creativeness here in it because it is instinctive and predetermined. On the other hand, concrete authentic life, life as of a real living being, is a description of poetry quite in keeping with its instinctive origin. It is not, therefore, merely the philosopher's predilection for his own jargon which makes me prefer my own account to the notion of creation. Creation out of what?

Moreover, when we look more closely, prose also is creative in its selectiveness, for instance in the rigid self-restriction of some writers to the barest and fewest words, a practice so different from that of common speech or ordinary literary craft. Indeed, in so far as it is beautiful, prose always has a certain element of strangeness, because the artist is not transcribing as in mere craft, but mixing himself with his subject, according to the old formula of *homo additus naturae*. "No beauty but hath some strangeness in the proportion" is a famous apophthegm. And poetry, on the other hand, may use nothing but the plainest words, as in much of Wordsworth, and its originality and lyrical power may lie not so much in its inventiveness as rather its expression of what I have so repeatedly called authentic life—"Rolled round in earth's diurnal course with rocks and stones and trees"; where the shock of the strange but not new word "diurnal" helps to make us part of the actual unending motion. The "incense-breathing morn" is morning herself as she lives, and who does not feel the same intimate sympathy with the life of the flowers in the familiar "I know a bank" which I quoted at the outset? Everything which heightens this sense of intimacy with the subject adds to the poetical effect because it removes us from even the vividest inspection of a thing to its interior. And as has been said before, metre with its repetition is a potent means of compacting words into the expression of spontaneous life.

(Concluded)

MAN THE MEASURE OF ALL THINGS: SOCRATES VERSUS PROTAGORAS (II)

P. S. BURRELL, M.A.

FIRST CRITICISM OF THE THEORY (I61C-I62C).—This is of the nature of an *argumentum ad hominem*. In the first place, (1) It is surprising that so clever a man as Protagoras did not see that he proved more than he intended, for according to his theory not only are all men, the wise and the foolish, reduced to the same level, but on the plane of sentient experience it is just as true to say that a pig or a tadpole is the measure of all things.

(2) His own life had been a systematic violation of his creed. If what he preached was true, then he had no right to preach, since his doctrines showed that his disciples, without any instruction from him, were as wise as himself. He had fooled them into believing that he could make them wiser than they were, and therefore had taken their fees under false pretences. It looks, indeed, as if he had been talking with his tongue in his cheek, and while flattering people that they were equal to the gods, to whom the maxim applies no less than to men, he really made them out to be no higher than tadpoles.

(3) It completely stultifies Socrates' arts of midwifery and the whole practice of dialectic, for it is utter nonsense to investigate and try to refute another's opinion, when every man's opinion is correct. Is the "Truth" of Protagoras true, or is it only a sort of solemn jest?

These criticisms seem so damaging that Theaetetus exclaims that the theory now seems as bad as he thought it good during its exposition. Socrates, however, warns him not to be taken in by what he ironically calls "clap-trap," for Protagoras could reply, on the one hand, that it was irrelevant to bring in any reference to the gods, because Protagoras was a professed agnostic in regard to their existence,¹ and, on the other, that it is not enough to hold the theory up to ridicule by plausible arguments fit for boys and old men, at once puerile and senile; it ought to be subjected to the same sort of demonstration as theorems in geometry.

Socrates accepts the challenge (I63A-I65E). The theorem is "knowledge is perception." Taking Protagoras strictly at his word

¹ "With regard to the gods, I cannot feel sure either that they are or are not, nor what they are like in figure: for there are many things that hinder sure knowledge, the obscurity of the subject, and the shortness of human life."

he demonstrates the theorem to be false by appealing to facts of experience

For (1) If we have not learned a foreign language, do we know it by merely hearing it spoken or seeing the script? If not, we must deny that we hear the words or see the writing, which we do not understand. If we have learnt it, then we know its meaning, *i.e.* what we cannot see or hear. Knowledge and perception are, therefore, not identical in learning a language.

(2) Again, take the case of memory. If you know what you remember to have seen, you must at least know what you have just seen when you shut your eyes. Hence you know what you do not see, unless you forget everything you see as soon as you cease to see it. This, however, is not the case. Once again, therefore, knowledge is not perception.

(3) It involves the still greater absurdity of knowing and not-knowing the same thing at the same time, because, if you cover one eye, you see (*i.e.* know) with one eye and do not see (*i.e.* do not know) with the other. The hypothesis was: "I know what I see" and "I see what I know." But here is a case of "I do not know what I see" and "I see what I do not know."

(4) It involves any amount of similar puzzles, *e.g.* Is my knowledge of a thing just the same whether I see it a yard or a mile away, whether I see it dimly or clearly? and so on. These instances seem to knock the bottom out of the theory and to prove that the theorem which declared error to be impossible is itself erroneous.

Socrates, however, thinks it is too soon to crow "like an ill-bred gamecock"¹ before the victory is really won. For so far there has been, so to speak, only a preliminary engagement, and a counter-attack is possible.

REPLY OF PROTAGORAS (166A-168C).—Protagoras, in fact, has reserves to bring up, and can retort that these arguments, calculated only to impose on a child and to make himself personally a laughing-stock, have convicted him only of verbal, not of real contradiction. They do not touch his own doctrine, being based on the misunderstanding that there is any similarity between an actual feeling and the memory of it. Apart from that there should be no reluctance to admit that it is possible for the same man to know (*i.e.* actually to see) and not to know (*i.e.* to remember) the same thing. Or, if any one is timid enough to boggle at that apparent paradox, he should realize that the person who remembers is not really the same person as the man who saw it, as he has become wholly different, just as a person is changed by sickness into an altogether different person. Indeed, everyone is plural, not singular, not "some one," but

¹ *Theaet.*, 165C.

"some ones"—in fact, endless generations of them produced by the process of becoming unlike one another.

The proper thing to attack is Protagoras' own theory and prove either (1) that perceptions are not peculiar to each individual, or (2) that if they are peculiar, the object which appears to him does not for all that "*become*" or, in conventional parlance, "*be*" to him alone. As for the gibe of Socrates that he brackets men with "pigs and dog-faced baboons," his behaviour like a swine in controversy shows that the cap fits in his case. Of course, Protagoras does recognize that there is an enormous difference between individual men, between the wise and the unwise. But by the former he means those who make people *better* by changing their condition from bad to good, so that they will have opinions corresponding to those conditions, just as doctors make their patients feel better by drugs and improve their tastes, or as husbandmen change sickly plants into healthy ones, or wise and good orators (*e.g.* the Sophists and himself) make what is good, instead of what is evil, seem to be right and honourable to both states and individuals by means of words or "talks" (*λόγους*).¹

The familiar and often perverse use of language must not be allowed to mislead. The business of the wise man is amelioration, to make men better, not wiser. In private life he does not make the ignorant or the unhealthy think truly instead of falsely, for *ex hypothesi*, false thinking is impossible, because a man cannot feel otherwise than he does feel. All that the wise can do is to replace a bad condition by a good one, and thus give a man a better attitude to life. Similarly in politics, what seems right and honourable to a state is always true for it: the only thing the wise man does is to replace a *bad* conventional code about what seems right and honourable by a *good* one. This is the only thing possible in a world of changing appearances. It is in this sense only that some men are wiser than others, and the recognition of this is in no way inconsistent with the general principle that no man has false opinions, and consequently Socrates, whether he likes it or not, "must endure to be a measure." That is the real position at the back of the doctrine that knowledge is perception which should be attacked, *viz.* (1) that all things are in motion; (2) that what appears to each is so to each, whether in individuals or states.

Such is the best way, Socrates suggests, of rallying the somewhat shaken forces of Protagoras. It is, of course, only a dodge to evade the main issue. It is really the contention of pragmatism that truth can be *made* and that truth is reducible to the useful or expedient. Protagoras was, no doubt, rather a slap-dash thinker, who does not

¹ Can this refer to the Sophistic boast of "making the worse appear the better reason," of which the unsophisticated wrongly accused Socrates?

see that he has really given his case away. While denying a criterion of truth and error, he admits a criterion between good and bad, but leaves it an arbitrary one. He presupposes a standard of health in the individual and the state, and assumes that the difference between health and sickness is known, though known only to the wise, the doctors and politicians. It assumes also that what appears to be healthy to the doctors and politicians is not what appears to be healthy to the individuals and the states which have to be altered. It also evades the question which arises, if the doctors and politicians respectively disagree. The problem of appearance and reality, of truth and error, is only camouflaged, not solved. For the question what is the *true* good is still unsettled. Is it the good as it appears to the doctor and the reformer, or the good as it appears to the patient and the state, which they treat? The practical solution does not settle the theoretical question, and it has still to be considered whether the distinction between good and bad does not involve a distinction between true and false.

THE SECOND EXAMINATION OF THE THEORY (I68D-I86E) is subdivided into five sections:—

- (1) I68D-I71C, which proves that the dictum of Protagoras in acknowledging the truth of its denial contradicts itself.
- (2) I71D-I72C, which re-formulates the pragmatist version of it.
- (3) I72C-I77C. Digression contrasting the practical rhetoricians with the true philosophers.
- (4) I77D-I86E, concluding arguments, which prove that the dictum is untrue (a) in regard to the future (I77D-I79C); (b) in regard to present perception (I79C-I84A).
- (5) Demonstration that the doctrine of perception is fundamentally erroneous, because it ignores the existence of the soul and the intelligible reality, which it apprehends (I84A-I86E).

(1) To meet the objection that his arguments were calculated only to impose on a child, and had been only a display of pleasantry, treating the doctrine with levity, Socrates now prevails on Theodorus to take part in the discussion. Being an expert scientist, accustomed to mathematical demonstration, he would be a guarantee for keeping the discussion of the serious views of Protagoras on serious lines, at any rate till it could be seen whether all men were "as much a measure," *i.e.* as competent, as Theodorus in the special sciences, astronomy, etc., in which he was an acknowledged authority. As for himself, though Protagoras had trounced him severely by his long-winded invective, Socrates was not downhearted because he had such a terrible passion for dialectical gymnastic, that "no strong man of words" (I69C) had ever forced him to give in.

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The first question to be argued was whether he was right or wrong in criticizing the doctrine on the ground that it made each man self-sufficient for wisdom, and to avoid the reproach of being unfair to Protagoras they must be quite sure what his position is. It is, "that which *appears* to each man *is* really to him to whom it appears." Well, is it not a fact that "there is no one who does not think himself wiser than others in some things, and others wiser than himself in others." At any rate, in times of peril, in war, in disease, and at sea, they seek guidance from teachers and from rulers, and even Protagoras had made the damaging admission that some persons, "the wise and good orators," the doctors and husbandmen, excel others in respect to what is better and worse. This implies their belief that both wisdom and ignorance exist among them, and by wisdom and ignorance they mean true and false opinions respectively. Moreover, according to the doctrine of Protagoras, this opinion is true. Therefore it leads to a dilemma. Whether the opinions of men are sometimes true and sometimes false, or whether we say they are always true, it follows in either case that their opinions are not always true, but may be either true or false. Neither Theodorus, who teaches mathematics, nor the disciples who learn from Protagoras, can possibly think that no person thinks that another is ignorant or has false opinions. As the conclusion is not immediately apparent to Theodorus, Socrates explains: (1) When you arrive at a judgment and state your opinion, it is true to you; but (2) the rest of us may sit in judgment on your opinion; and (3) we do not always judge your opinion to be true. Indeed, thousands of people who give Theodorus a world of trouble think his judgment is false. The inevitable conclusion is that in that case Theodorus' opinion is true to himself, but false to thousands of others.

The argument applies to Protagoras also. For on the one hand, if neither Protagoras thought, as his profession of teaching others, and his admission that some men are wiser than others about better and worse imply, nor most people think, as they certainly do not, that "man is a measure," then it must follow that his "Truth" is truth to no one. If, on the other hand, Protagoras thought that man is a measure, and others do not agree with him, then (1) it is as much more false than true as the number of those who disagree exceed those who agree—that is, truth is decided by counting heads! and (2) there is this very "smart" result. In admitting the truth of the opinions of those who think that his opinion is false, he admits that his own opinion is false. And as the others refuse to admit that they are in error in thinking his opinion false, while Protagoras, by virtue of his dictum, has to admit that their *refusal* to acknowledge themselves in error is *true*, therefore all men, beginning with Protagoras, admit that "neither a dog nor any casual man" is a measure of

anything whatsoever that he has not learned. So it follows that the "Truth" of Protagoras is true, not only to nobody else, but not even to himself. In short, *the opinion which acknowledges the truth of its denial cannot be true.*

(2) But the pragmatist reconstruction of the theory has still to be dealt with, and must first be formulated precisely. It is as follows: (1) While most things, *e.g.* hot, dry, sweet, etc., are to each man as they appear to him, some people excel others in matters of health and disease; (2) while justice, honour, and piety, and their opposites, *i.e.* public opinion as expressed in conventional codes, are to each state as they appear so long as they are maintained, some counsellors excel others as to what is expedient for the state. For it would be rash to assert that a policy adopted by a state in the belief that it is expedient will turn out to be expedient in the realization.

(3) Before, however, this modified doctrine is examined, a famous "digression" eloquently contrasting the true philosopher with the self-seeking man of the world who takes the world as he finds it is introduced, the significance of which has been variously interpreted by Platonic scholars.¹ Thus high authorities have regarded it as an "interruption" or "postponement" of the argument, "unconnected with the main theme of the dialogue." If, however, it is considered in close relation to the structure and rhythm of the dialogue, it clearly seems to be deliberately designed as a dignified rejoinder to the petulant didactic outburst (166A-168B) of Protagoras in reply to the first criticism of Socrates. It seems to be not so much an "interruption," as one of the "joints"² which articulate the body of the dialogue, indicating that Protagoras has raised a larger and more ultimate problem, the bearing of which on the immediate question at issue needs to be pointed out, but the full discussion of which must not be allowed to interfere with the progress of the argument. Protagoras has laid it down that the wise man is the man who can change the condition of individuals and of bodies politic from worse to better, so that the appearance or opinion corresponding to the one condition may be replaced by the appearance or opinion corresponding to the other, though both the worse and the better appearances are true, in accordance with the principle of his dictum that all opinions are true and infallible. In this he clearly anticipates

¹ Vide Burnet, *Greek Philosophy*, §184, and Taylor, *Plato: The Man and his Work*, pp. 334-336, who consider it Plato's expression of reluctant farewell to the theoretic life before plunging in Sicilian politics.

² Cf. *Phaedrus*, 264C. "Every discourse must be organized like a living being, with a body of its own, so as to not to be headless or footless, but to have a middle and members, composed in fitting relation to each other and to the whole."

the claim of pragmatism that truth is *made*, for it is what the "wise man" causes to appear to the individual or state which he changes for the better. Both bodily health and the code of justice are what the doctor and the "wise," good orator (*i.e.* the sophist), respectively, produce in the individual and the state submitted to their treatment and education. But, like a slovenly thinker, he has omitted to explain how the wise man can distinguish good health from bad, and a good code of laws from a bad one, so that he can make them change places. He has simply assumed that he has a criterion of both good and bad, either forgetting or not realizing that this is a matter about which people differ profoundly. He makes the criterion purely arbitrary. The wise man, who is a physician, advises how to produce a good condition in the body. But what is the nature of this wisdom and this good condition? We know that there is a broad distinction between two classes of advisers. There is the charlatan, who is content to make his patient feel well instead of ill and uncomfortable, but avoids prescribing any disagreeable alteration in his habits of life. He is satisfied with the appearance and not the reality of health. The genuine doctor, on the other hand, who has studied what health and fitness really are, wants to make his patient really fit and strong, and will not hesitate to prescribe medicine and treatment, which may be highly distasteful.

Similarly, in the body politic, there are two classes of men who aim at putting the world to rights. The first, the sophist, believes that justice is an affair of convention, varying from state to state, and is only a name which means different things in different environments, though for any given state the code for the time it is in force is authoritative. Such a man, obsequious to public opinion, takes care to square his policy by conventional standards, seeks popularity and makes it pay. He caters for the great sophist, the multitude, pandering by his well-timed speeches to its tastes, which he thoroughly understands. Such a man will get on and gratify his low ambitions, but leanness will enter into his soul. The second kind of adviser is the philosopher who holds that justice belongs to the nature of things, and that justice and injustice are eternally distinct. He is absorbed in the study of nature and seeks to know "what man is, and what it is his duty *qua* man to do."¹ Interested not in justice as it is like the man of the world, but in justice as it ought to be, he strives not merely to appear to be just, but to be just, and teaches people accordingly. He is naturally unpopular, for people do not understand a man who will not join in the popular struggles and intrigues to realize the world's ambitions, pleasure, power, and rank. He tries to conform his life to the ideal, not to the actual. He seeks real happiness, and knows that the way to it is to be really just, *i.e.*

¹ *Theaet.*, 174B.

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to be so for its own sake. In the world he is at a discount, like the star-gazer who fell down a well; but when it comes to these great issues, it is the man of the world, not he, who becomes dazed and giddy. Which type of counsellor then is the best?

Theodorus is sure that if the latter were followed there would be more peace and less evil in the world. Socrates, however, reminds him that this can never be, because the interval between the actual and the ideal is never closed on the mundane plane of existence, where there is always evil for good to oppose. The ideal is only realized amongst the gods.¹ That is why the pursuit of justice is striving to be like God, and doing injustice is becoming unlike Him. This is the real distinction between wisdom and virtue and vice and ignorance, and the real punishment of the wicked is not stripes and death, but the unconsciousness of their state. There are two patterns eternally distinct in the nature of things, the one divine and blessed, the other godless and most miserable, on the choice of which depends man's immortal destiny. Which band of counsellors, then, is to be followed, the sophists, who recommend seeming good, or the philosopher, who recommends real good? But that is a question concerning what is good as it really is. It is too big to be considered as a side issue, and it must not be allowed to swamp the debate with Protagoras.

(4) (a) *Criticism of the Amended Pragmatist Version of the Doctrine and its Application to the Future* (177D-179C).—The reconstructed doctrine assumes an antithesis between just or right and good or expedient. For it asserts, on the one hand, that whatever a state believes to be just and establishes as positive law and public opinion is just to that state, and that in this respect no state or citizen is wiser than another—that as regards its code of laws and code of honour, etc., there is nothing to choose between one state and another, each doing what is right in its own eyes, and therefore on the same level as the rest. This is a version of the regular sophistic doctrine that justice is a matter of convention, not existing by nature, so that justice is only a name for different, perhaps opposite, things. It asserts, on the other hand, that as regards policy, *i.e.* what a state decides to be advantageous to itself, one counsellor is better than another, and that the opinion of one state is better than that of another, for there is no guarantee that what a state or counsellor thinks to be advantageous will necessarily turn out to be so. This admission seems to be confirmed by the contrast just drawn between the two ideals of what is good for mankind. But this contrast also suggested that the antithesis between just and good was false, for it earnestly maintained that there was a world of difference between appearing to be just and really being just, and that the former was bad and the latter was good.

¹ This is evidently a hit at the agnosticism of Protagoras.

If we carefully observe, Socrates argues, state action in the matters of law (what is just) and policy (what is expedient or advantageous), we see that this is the case. For in both instances the state is doing the same thing, *viz.* making laws, enactments, decisions, and has the same aim in both. Both are cases of legislation, and the object of legislative action is to make the laws as advantageous as possible to the state; it is aiming at the public good. But it is notorious, as the theory acknowledges, that a state often makes mistakes in legislation, and misses the mark it was aiming at, *viz.* its own best interests. As, therefore, what a state lays down as just in positive law is the effect of legislative action, and legislation is for the sake of the public good, the state can claim no infallibility in matters of right and justice. So the attempt of Protagoras to bolster up his dictum by assuming an antithesis between right and good has broken down, for it makes a distinction without a difference.

Its failure becomes clearer still if we take a more general view, having regard to the relation of the past and present to the future. Legislation, of which just arrangements, and not merely programmes of policy, are a branch, belongs to the class not of "what is," but of "what is to be." In other words, laws are made in the present with a view to advantage in the future. Granted that man is a measure and has the criterion in himself of all such things as white, heavy, etc., and in regard to his perceptions of them at the moment thinks what is true to him, does it follow that he also has the criterion in himself of "what is to be" in the future? Is there any guarantee that whatever he thinks will be good for him, will actually be good for him? Now, this is notoriously not the case. A patient is not as likely as his doctor to be right as to whether he will have fever or not. A lyre-player cannot tell you whether a wine will be sweet or dry as correctly as a husbandman. A gymnastic instructor cannot tell whether new music will be tuneful or not so well as a musician. A cook will be better able to judge whether a dish will be agreeable at a banquet than a guest. And last, but not least, Protagoras, the super-rhetorician, will be the best judge of what arguments will impress a jury much better than an ordinary man. In all these cases, which involve forecasts of the future, the expert's judgment is truer than the layman's. It follows, therefore, that whether we consider justice as a branch of law-making, in which mistakes are notorious, or, as belonging to the class of things "which are to be," in virtue of the future advantage aimed at, the dictum of Protagoras does not apply. Consequently, the reconstruction of the doctrine has done nothing to prove Protagoras' theory that "man is a measure of all things," but goes to show that he is obliged to admit not only that one man is wiser than another, but that the man who is so is the expert in his own particular line, and consequently that

"Socrates, not being an expert, is not in the least obliged to become a measure."¹

(4) (b) *Criticism of the Doctrine as true of the Experience of the Moment* (179C-183C).—The central stronghold of the dictum that man is the measure of all things is that in the immediate instantaneous experiences of each individual percipient the perceptions and the opinions corresponding to them are true and infallible. Thus the *homo mensura* of Protagoras is the psychological generalization, and the Heraclitean doctrine of universal motion the metaphysical explanation of the experience that the same wind is cold to one man and not cold to another man at one and the same time (152B). It is the most difficult position to capture, as Socrates, with his customary irony, points out before delivering his final assault. It may, he says, be impossible to prove that the perceptions and opinions of the moment are not absolutely clear and "knowledges." But Protagoras challenged us to test the metaphysical ground of the theory, *viz.* the doctrine of flux (168B), and we must go close up to it and "tap it to see whether it is sound or rotten." It is a very widespread doctrine which has given rise to much controversy, and there is a good deal of incoherence among its exponents in the development of their views. They are as fluid as the flux they describe. Hence it is hard to pin them down and keep them to a regular debate. Instead of that, they carry on a sort of guerrilla warfare with puzzling epigrams and pretentious terminology, and seem to think they can solve a problem by a change of vocabulary. At any rate, they take good care "to let nothing be settled in their minds or language." Hence the difficulty of formulating their views. In these circumstances, Theodorus, the mathematician, who finds them very slippery customers, proposes that, as you cannot argue with them, Socrates and himself should take over the doctrine themselves and investigate it like a problem (or, as we should say, theorem) in mathematics. Socrates accepts the suggestion, for, after all, both its ancient and modern adherents are agreed about its main principle, and the latter have made it perfectly "clear even to cobblers" that it is only simpletons who believe that some things are in motion and others at rest, when, as a matter of fact, motion is universal. And the uncompromising character of the theory is set in clear relief by contrast with the opposite extremist doctrine of rest held by Melissus and Parmenides that the world is absolutely motionless. Properly to deal with the question which view is true of reality, it would be necessary to examine both views, but this might expose them to an awkward cross-fire. So he decides to concentrate on one thing at a time and examine the first theory, the theory of flux, with which he is immediately concerned, and judge it on its merits.

¹ *Theaet.*, 179B, cp. 167D and 150C. ἄγονός εἰμι σοφίας.

He then gives the following demonstration according to the request of Theodorus:—

The proposition is: *If all things move, perception is knowledge.*

Now motion is of two kinds: (1) locomotion (*φορά*), either (a) from place to place, or (b) rotatory, *e.g.* the spinning of a top; and (2) alteration (*ἀλλοίωσις*), *e.g.* growing old, turning white, softening and hardening, etc.

Again, everything always moves in both ways; otherwise moving things will also be at rest, and then they have no more right to be called moving than standing still, and there will not be universal motion.

Further, according to the doctrine of perception advanced on behalf of Protagoras (156A–157B), the world is really an unceasing torrent of twins generated by the meeting and friction of motions, which have the potentiality of acting on and being acted on by one another. *Qualities*, *e.g.* heat or whiteness and perceptions of them, *e.g.* sight and touch, are the twins produced by quick motions; and *things*, *e.g.* hot or white objects and percipient organs, *e.g.* eyes, etc., are produced by slow motions; and things only become things and organs only become percipient at the moment of perception. Then only is the thing “white” and the eye “a seeing eye.”

But, *ex hypothesi*, these “twins” are in all kinds of motion at once, moving in space and undergoing alteration simultaneously; for if they moved in space without undergoing alteration, unchanging qualities would attach to things in motion, and then motion would not be all in all.

Therefore, neither things nor qualities are stationary, but move with both kinds of motion. So we cannot say of that which is in flux that it even “*flows white*,” in correction of “is white” or “becomes” white, for the “white” is always changing into something else; and even “whiteness” itself is in flux, altering to another colour “to avoid being caught standing still.” And similarly of all so-called qualities and qualified things.

Therefore, strictly speaking, we have no business to speak of colour or anything else; for there is literally nothing which we can call colour, because “even while we speak it is always sneaking away” (182D).¹

The same reasoning applies, of course, to perception itself, *e.g.* seeing and hearing, etc. Seeing cannot remain fixed in the act of seeing. Therefore we cannot speak of seeing rather than not seeing nor generally of perception rather than of non-perception.²

¹ According to the Heracleiteans, we are worse off than Alice in Wonderland, for we can see neither the cat without the grin, nor the grin without the cat, nor both together.

² Cf. *Gratylus*, 439C–440C. But if even the very reality or form of knowledge changes, simultaneously it would change into a form different from

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But since, according to Theaetetus, perception is knowledge, the answer to the question what is knowledge, *viz.* "knowledge is perception," explains knowledge no more than what is not knowledge.

Hence, "if the correction we made in the doctrine of motion, *viz.* that things do not only move *or* alter, but *both* move *and* alter (181C), in our anxiety to demonstrate that all things are always in all kind of motion, produces this result, then it is a pretty correction" (183A). For it makes the doctrine of motion destroy the theory of knowledge which it was invoked to support.

But that is not all. We have found out also that every answer to every question about everything whatsoever is similarly correct. We can answer indifferently, "it is so," and "it is not so," or, if you want to be precise, "it *becomes* so," etc., in order to avoid "making things stand still by your speech." Nay, properly speaking, we cannot even say "so and so," for not even that expression implies motion. The advocates of the theory of flux must therefore adopt some other system of sounds to express themselves, since their hypothesis does not justify any articulate intelligible speech, except possibly the indefinite "nohow."

Thus the theory of motion destroys not only the sensationalist theory of knowledge, but itself into the bargain, since it destroys even the possibility of its own formulation. It makes speech impossible, because it renders the universe literally unspeakable. Socrates, having convicted the theory of this double contradiction, is now justified in saying that they have now done with Protagoras and are not going to admit (1) that man is the measure of all things unless he is a sensible man; or (2) that "knowledge is perception" is justified by the doctrine of universal motion, unless Theaetetus has anything else to say.

At this point Theaetetus begs Socrates and Theodorus to discuss the opposite theory that "the universe is motionless." Socrates, however, refuses to do so chiefly on the ground that its discussion would obstruct the original argument about the nature of knowledge. For this is not yet finished, as there is still a most important point to be cleared up, and it requires a further application of the midwife's art.

(5) *Concluding Criticism of the Doctrine of Motion* (184B-186E). *The Fallacy of "the Seeing Eye."*—According to the theory of universal flux, the facts of perception were explained by the interaction of two pairs of motions, *viz.* perception and perceived quality, perceiving organ and perceived thing. When sight, *e.g.*, perceives whiteness, the eye becomes a "seeing eye," and sees a

knowledge and there would be no knowledge; and if it is always changing, always there would be no knowledge, and according to this argument there would be nothing to know and nothing to be known.

white thing.¹ Three of these factors, perception, quality, and thing or object, have been dealt with and shown to be meaningless nonentities if the theory of motion is correct. Thus three-fourths of the explanation has been demolished. What about the remaining part, "the seeing eye"? Is there any sense in that expression?

Socrates points out that it rests on a complete misconception, which is due to a loose and inaccurate use of language. As a matter of fact, *the eye itself does not see*. It is not even an agent, as it were, to *see with* (ὧ ὁρῶμεν), employed to do the work of seeing on our behalf. Strictly speaking, it is a channel or instrument (ὄργανον) *through which* (δι' οὗ) *we* see things, and similarly with the other sense organs. The notion of a "seeing eye" is due to a false abstraction,² whereby the organ is isolated from its user, much in the same way as in empirical psychology a feeling is often taken in abstraction from the feeling subject. The cardinal error of the whole theory is to regard a person as a sort of wooden Trojan horse with an aggregate of perceiving organs, like a number of Greek heroes, seated within it. Such an idea is inconsistent with the obvious fact that the sense organs are all connected parts of a single bodily organism, each performing its own function and none other. We cannot, for instance, hear sounds through our eyes or see colours through our ears. But though there is this division of labour among the several organs, they all transmit their impressions to one and the same part of us,³ "a single form, whether it should be called soul or something else."⁴ The name does not matter; the important thing is to recognize the fact. It is this "soul" or animating principle which makes an organism an altogether different thing from an inert wooden horse, containing an assortment of perceiving organs. For it is the soul that perceives the objects of perception through *its* various organs of sense, seeing colours through the eyes, hearing sounds through the ears, and so on. The eyes are *mine*, and *I* see through *my* eyes.

But the soul is not merely a sentient principle. For besides receiving impressions of the objects of perception through the sense organs, we think and talk *about* them, their existence, their identity, their difference, their number, their likeness, or unlikeness, their beauty or ugliness, their goodness or badness—in short, their existence, nature, relations, and value. But these aspects or characteristics belong to all objects of perception, and cannot, therefore, be per-

¹ *Theaet.*, 156E, ὁφθαλμός ὄρων.

² The idea that the brain thinks is an instance of the same fallacy. The theory examined by Plato seems to be an anticipation in simple form of Behaviourism.

³ *Theaet.*, 184D, τινι ἡμῶν αὐτῶν τῷ αὐτῷ.

⁴ *Ibid.*, 184D. εἰς μίαν τινὰ ιδέαν, εἴτε ψυχὴν εἴτε ὅ τι δεῖ καλεῖν.

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ceived through any or all of the bodily organs, which are each limited to the apprehension of its own special class of object, and cannot therefore transmit common or universal characteristics belonging to no particular class of object. As, however, we think and talk about them, there is no doubt that the soul is aware of them; and, as it does not become aware of them through the medium of the sense organs, there is only one alternative left. The soul must observe or consider them immediately or directly through or by means of itself.¹ The soul, then, discharges two functions: It receives the impressions of objects through the special sense organs, and it surveys the common "things" which belong to them all by its own inherent powers.

The sensible elements reach the soul automatically through the body immediately from the moment of birth, and are perceived by animals as well as by mankind. Man is an animal; but in virtue of his apprehension and study of the universal elements he is also a rational animal, according to the old scholastic definition. But the work of understanding the intelligible elements is a slow and difficult business. The soul "goes up" to them and "compares them" together and tries to "judge" them.² The business of "casting up its accounts"³ or reflecting on things, their existence, nature, and value, is gradual, and takes time and education. This means that reality and truth and knowledge are very hard to come by. Now the presupposition of the theory that "knowledge is perception" is that perception is always of reality, and that there is exact correspondence between the perception and what is perceived.⁴ It is always true and incapable of error. That is, it is always in possession of the truth, because it is always perception of the reality, and is therefore knowledge. Knowledge is apprehending the truth of the reality, which perception apprehends. It follows that you can never know anything the truth of which you fail to attain (186C). But the preceding argument has shown conclusively that reality is not to be found in the impressions of sense, *e.g.* the hardness of the hard, etc., through touch with which the soul is affected (*παθήματα*) through the body, and therefore the soul never reaches the truth of the reality through that channel. It is, therefore, impossible to find knowledge there either. Reality is only to be found in the reasoning about the impressions (*ἐν τῷ περὶ ἐκείνων συλλογισμῷ*), *i.e.* in observation, comparison, and reflection on the common or universal aspects of

¹ *Theaet.*, 185E, ἀντὶ δι' αὐτῆς ἡ ψυχὴ τὰ κοινὰ μοι φαίνεται περὶ πάντων ἐπισκοπεῖν.

² *Ibid.*, 186B.

³ *Ibid.*, 186C, ἀναλογίσματα.

⁴ *Ibid.*, 152C: "Perception is always of that which exists, and since it is knowledge, cannot be false." And 160C: "Then to me my perception is true, for in each case it is always perception of what is for me."

things, which the soul observes by its own powers independently of the senses. These processes are quite different from sense perception. Therefore knowledge or the attainment of the truth about reality is not the same thing as perception, in which it is impossible to find either truth or reality, the attainment of which is the indispensable condition of knowledge. Thus the definition of Theaetetus, the "Truth" of Protagoras, and the universal flux of Heraclitus have been tumbled in one common ruin. So far from the truth of Protagoras stultifying the dialectic of Socrates, it has stultified itself. In order to upset the sophism that "all opinions are true," Socrates had to demonstrate the existence of falsehood, and he did it in the most piquant way by proving the error of the denial of error. Protagoras, too, denied the difference between appearance and reality, because all appearances are real; but in his own person he produced the most startling evidence that some appearances are *unreal*; for what *appeared* to him proved to be a misrepresentation of reality. Thus Socrates somewhat paradoxically establishes the existence of truth on the certain fact of error.¹ In taking this course, he took a thoroughly practical course, for he was starting "from what is known to us." For we certainly know much more about making mistakes than we do about the truth.

It remains to estimate the achievement of Socrates. His argument against Protagoras might be described in modern terms as a triumphant exposure of subjectivism, relativism, pragmatism, or whatever be the fashionable name for plausible and shallow scepticism. In Platonic language it might be described as a duel between dialectic and rhetoric, appearance and reality, being and becoming, sophistry and philosophy. In Socrates' own language it is a demonstration that the "truth" of Protagoras is untrue. Perhaps it might be appropriately described as the most brilliant exhibition in the Platonic dialogues of the Socratic method in the act of vindicating its own validity. Aristotle, with his customary penetration, has analysed it into its elements. In a well-known passage² he says that "two things may fairly be ascribed to Socrates—inductive arguments and universal definition, both of which are concerned with the starting-point of knowledge." In another passage³ he refers to "the

¹ It is worth noticing that the Socratic method is the exact opposite of that of Bradley, who wrote: "before we deal with error we must gain some notion of what we mean by truth" (*Appearance and Reality*, 1st edition, p. 162).

² *Metaphysics*, 1078b, 24.

³ *Ibid.*, 987b, 31. This σκέψις ἐν τοῖς λόγοις is ascribed to Plato, and said to be the cause of his introduction of the Ideas. But the passage is pretty evidently a reference to the passage in the *Phaedo* (99E), where Socrates says: "he fled for refuge to statements in order to examine the truth of things in them."

examination of statements or theories" as an original feature, unknown to earlier thinkers, who had no tincture of dialectic.

His explanation of this is less commonly quoted. "It was with good reasons," he says, "that Socrates used to seek what a thing is" (its being or essence). For he was seeking to syllogize, and the starting-point or principle of syllogism is the "what a thing is."¹ Here Aristotle lays his finger on the point. Aristotle gets the credit and indeed claims for himself the credit of being "the founder of logical science."² "The system I have expounded," he writes in the *Sophistici Elenchi*, "had not been partially, though imperfectly, elaborated by others; its very foundations had to be laid."³ It would be more accurate to say that he only systematized the science and art of logic. Its real founder was Socrates, who first discovered its principles. The *Theaetetus* lets us into the secret of how and why he did so. He had to vindicate logic against the sophistic denial that there was or could be any such thing, and without the employment of any technical language or any expert knowledge he showed how it could be done.

First of all, he requires an absolutely general statement or definition of the sophistic position. Next, with the aid of his opponent, he formulates with precision the meaning of the theory to be examined. Then with that skill in "deriving his arguments from facts,"⁴ for which Diogenes Laertius commends him, he inductively tests the theory by facts, producing a series of telling instances, which cannot be gainsaid, and shows that it is fairly riddled with contradictions, contradictions between theory and practice, discrepancies with psychological experience, contradictions in itself, and contradictions in its metaphysical ground. He thus reduces to absurdity the theory that made his own method a farce, by showing that the denial of the possibility of error is itself erroneous.

But he not only scored a personal triumph over Protagoras by forcing him to acknowledge that he himself was in error; he showed at the same time the way in which the first principles of reasoning, the indemonstrable principles, on which all demonstration and sound argument rests, must be established.⁵ He set the example of showing that the denial of them necessarily involves the recognition of their truth, and consequently defeats itself. He showed that effectual refutation is self-refutation: that a false theory must be

¹ *Metaphysics*, 1078b, 23.

² Adamson's *Short History of Logic*, p. 23.

³ Mr. Poste's translation quoted by Adamson, p. 22.

⁴ *Diog. Laert.*, II. 29. ἤν γὰρ ἱκανὸς ἀπὸ τῶν πραγμάτων τοὺς λόγους εὐλόγειν.

⁵ In *Metaphysics*, Bk. iv. 3-8, Aristotle's refutation of Protagoras seems to be going over the ground covered more attractively in the *Theaetetus*.

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made to explode itself. When philosophy made a fresh start at the beginning of the modern period, the method was employed again with triumphant effect by Descartes, who showed that it is impossible for doubt to doubt its own existence. But the founder of modern philosophy was only following in the footsteps of Socrates, for by his decisive victory over Protagoras, Socrates demonstrated once for all the truth so well expressed by McTaggart: "No man ever went about to break logic, but in the end it broke him."

(Concluded)

RENOUVIER: THE MAN AND HIS WORK (II)

PROFESSOR J. ALEXANDER GUNN

It is difficult within the space of an article such as this to do more than indicate the principal features of Renouvier's philosophy, and it is, of course, impossible to give in detail a discussion of the immense wealth of thought and argument contained in his writings. Of his thought before 1854, the most important piece of work was the article on "Philosophie" written for the *Encyclopédie Nouvelle*. This in some respects shows his own thought developing in the direction of his *néo-criticisme*. The *Essais de Critique générale* and the *Science de la Morale* are the works of his prime, and his most important writings. Of these the first two essays and the *Ethics* contain the essence of Renouvier's doctrines. In his later period *Le Personalisme* constitutes his most characteristic effort, but the works of his central period are undoubtedly his most significant and most important contribution to philosophy. We shall therefore endeavour to give some account of his doctrines in the *Logic* and the *Psychology*.

THE PROBLEM OF KNOWLEDGE

Renouvier, giving an account of his own philosophy in the last volume of his *Philosophie analytique de l'Histoire*, sets out a résumé of his purpose in the *Essais de Critique générale*.

- "1. To reconcile the phenomenalism of Hume with the Critical Philosophy of Kant by the restitution of the laws of reason in supplement to Hume and the ejection of indeterminate substance and the unknowable 'thing-in-itself' from the Kantian philosophy.
- "2. The definite rejection of the possibility of an actual Infinite in the order of quantity, the exposition of the consequences of the refutation of doctrines of the Infinite. The establishment of the necessity of a first beginning to phenomena, and therefore of creation, although no conception of a divine essence before creation can belong to human knowledge.
- "3. The confirmation of the idealistic method by new analyses of the ideas of Extension, of Matter, and of Motion from the point of view of infinite divisibility.
- "4. The correction of the empirical theory of Hume and the *a priori* doctrine of Kant with regard to the problem

of causality. That is to say, against Hume, the recognition of the concept of causality as a law of the spirit and of the world, having its foundation and its type in the willed act which moves, retains, and determines ideas. Against Kant, the recognition of freedom within the world of phenomena as the basis of ethics.

"The rejection of causality from the realm of natural law where it is misapplied to necessary liaisons between phenomena which are preordained as functions of each other. Its retention as a legitimate concept in relation to the self-moved action of internal phenomena in animals.

"The abandonment of the Kantian belief in metaphysics and ethics of pure reason operating *a priori*. The re-establishment of Belief in its proper sphere by the recognition of feeling in all conscious acts."

The reader who turns to the pages of the *Essais* will find himself in an atmosphere which recalls the empiricism of Hume and the criticism of Kant, but with differences so profound and original that Fouillée's "jibe" about Renouvier's "eclecticism" cannot be justified. He showed himself an enemy of both Eclecticism and Positivism, but he was prepared to approve the idealistic trend of Cousin's thought with many critical reservations, and he liked the emphasis given by Comte to the relativity of all our knowledge. He approved much of Hume's empiricism, while disagreeing with Kant's answers to Hume. Yet Kant's philosophy was, as it were, after Hume, Renouvier's starting-point, and his ethical doctrines owe much to Kant. We find ourselves in a realm of empiricism, phenomenalism, criticism, and idealism. Also Renouvier's emphatic pluralism, empiricism, and doctrine of belief and certitude have affinities with James's philosophy. He was not, however, a pragmatist.

Renouvier's empiricism was not the kind which turned away from the great problems in a sceptical way. He attacked them from his own angle, believing them to be as fundamental to philosophy as Kant had done. In the original preface to the *Essais* he wrote in 1854: "I frankly confess that I carry on the work of Kant and my aim would be that of pursuing seriously in France the work of criticism." He never was satisfied with Hume's sceptical position, but he appreciated it. Indeed, Pilon, Renouvier's friend, remarks in the preface to their joint translation of Hume's treatise, "Hume is really the first father of the Critical Philosophy" and "Contemporary Criticism of which M. Renouvier is the founder is connected with Hume as much as with Kant. He reconciles Hume and Kant by completing and correcting the one by the other by introducing clearly and under their proper name and with all their conse-

quences the categories or mental laws into the too limited psychology of Hume, while at the same time eradicating from the philosophy of Kant the evil germ of metaphysics founded upon the doctrine of substance, of which he (Kant) was unable to rid himself. . . . Something is lacking in Hume, the notion of Law. Something is superfluous in Kant, the notion of Substance retained under the name Noumena (*Ding-an-sich*). It was necessary to unite the phenomenalism of Hume with the *a priori* teaching of Kant. This was the work accomplished by Renouvier."¹

He did not spare his assaults upon Positivism as a doctrine of philosophy or religion, which he regarded as "an ambitious conceit." Yet one primary principle he accepted from Comte: "I here declare" (he says in his preface to the *Essais*) "that I accept one fundamental principle of the Positivist School, namely, the reduction of knowledge to the laws of phenomena. It is to the establishment of this principle (of which I make constant use) by an analysis of consciousness itself that the greatest part of this first essay is devoted; and this I believe to be in conformity with the method of Kant, although that philosopher, misled by metaphysical tradition, did not clearly distinguish it or follow its implications."²

The *Essais* open with the treatment of the fundamental problem of Knowledge, and Renouvier devotes the *Logique* to four aspects of this problem. He deals first of all with representation in general, taking phenomena as the elements of consciousness, as the immediate data of experience. From this he passes to a survey of phenomena. In the third and most important section he sets out and analyses the fundamental laws of consciousness or of phenomena, giving us his own list of Categories (differing considerably from those of Kant), and he concludes by examining the limits of knowledge and discussing very critically the possibility of a unique synthesis of all phenomena.

All knowledge is of representations. By taking representations as his starting-point, Renouvier feels he is on certain and indisputable ground. It may be claimed that we have knowledge of "things." With such an assertion Renouvier would entirely agree, for "things" he affirms have no meaning or significance for us except as data of consciousness, and we cannot attempt to define them apart from the conditions of consciousness. Things are given to consciousness as representations, and are only things at all to us if they are so presented. "Things" and "representations" (or, if we prefer, "phenomena") are synonymous, identical. All knowledge involves a relation of subject and object, for a knower and a known there must be.

¹ *Psychologie de Hume. Traité de la Nature humaine*. Trad. Renouvier et Pillon. Préface par Pillon. P. lxviii.

² Preface, *Essai I (Logique)*, Tome I, p. xvi.

Phenomena, or things, exist in relation to consciousness, and they have no other existence. There can be nothing presented to us which does not come under the general relation of subject-object. We have knowledge of phenomena and of nothing else. The Kantian thing in itself (noumena) is a meaningless fetish.

We find, however, that phenomena are presented to us in certain orders, of a permanent type or character. This permanence is itself a phenomenon, a general phenomenon if we like to say so, but not anything beyond phenomena. To such general phenomena or orders we give the name Laws. A law is merely a general classification of phenomena and expresses the relationship between phenomena (in which case it often goes by the name "function"). The problems of knowledge lead him to consider two questions, intimately connected:—

1. What can be made the principle of the division and the classification of the data of representation in general? That is to say, On what basis can we build up a *system of categories*?
2. What is certitude? By what sign are we to judge of the truth of criticism itself or of the exactitude of our analyses and the perfection of our syntheses?

In modern times Kant stands out as the noted propounder of new categories, but unfortunately he was not able to free himself from the traditions of the schoolmen. His famous Deduction of the Categories was based upon the terms employed in formal Logic, and his work was to a large extent vitiated by this and given a mechanical and artificial tone which would have been lacking "if he had perceived in the category Relation the key to all the others."¹ Kant also unwisely attempted to prove the validity of his categories and to show that there could be no more or less than he had enumerated. His basis was the possible forms of judgment and the result was arbitrary and artificial. His peculiar view of Space and Time as primitive forms of sensibility shut them out from his list of categories. The real fault here, however, lay in his division of consciousness into three parts, sensibility, understanding, and reason. He thus gave an air of abstraction to these, which might have been avoided. The distinction of sensibility and intellect can be sufficiently denoted in the study of the categories of finality and personality, Renouvier points out, and thus the categories are more perfectly representative of laws embracing our entire experience. Personality was not a category in Kant's system, and he neglected the power of will in relation to problems of the intellect by confining it (will) to his practical reason. As we shall see in his treatment of

¹ Renouvier's remark in his note on the Kantian Categories. *Logique I*, p. 133 (Note B) to chap. xxvi.

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Certitude, Renouvier does not approve of this isolation of the will from the operations of the theoretical reason.

Yet, in spite of grievous faults in his system, Kant, whom Renouvier styles "the last of the pure philosophers," enunciated quite clearly the part categories play. They are the irreducible and fundamental laws of phenomena, the moulds into which human experience naturally runs. One fault of the critical philosophy which Neo-criticism endeavours to correct is that Kant (and Hegel after him), blinded by the dogmatic rationalism which he fought but which nevertheless dominated to a large degree his own thought, was led into attributing to these laws, rules, or categories, something of an absolute reality over and above phenomena. For the New Criticism, phenomena and only phenomena exist.

Beginning from his fundamental dogma or thesis, "All is relative," Renouvier points out that as nothing can possibly be known save by or in a relation of some sort, it will be evident that the most general law of all is that of Relation itself. Relation is therefore the first and fundamental category, embracing all the others. Then follow, Number, Position, Succession, Quality. To these are added the important ones, Becoming, Causality, Finality, proceeding from the simple to the composite, from the abstract to the concrete, working up from those which are most easily to be singled out from the entire data of experience to those which are more or less bound up with all our experience, and culminating in the final category in which they all find their consummation—Personality. This last category, no less than the first, is of great significance in Renouvier's philosophy. The importance he attaches to Personality as the highest category colours his entire thought.

RENOUVIER'S CATEGORIES

CATEGORIES	THESIS	ANTITHESIS	SYNTHESIS
<i>Relation</i>	<i>Distinction</i>	<i>Identity</i>	<i>Determination</i>
Number (or Quantity)	Unity	Plurality	Totality
Position	Point (limit)	Space (interval)	Extension
Succession	Instant (limit)	Time (interval)	Duration
Quality	Difference	Kind	Species
Becoming	Rapport	Non-Rapport	Change
Causality	Act	Power (Potentiality)	Force
Finality	State	Tendency (Conation)	Passion
Personality	Self	Non-Self	Consciousness (Mind)

The table of Categories as thus set forth by Renouvier shows us a synthesis at each stage combining two terms mutually exclusive, and thus forming, by the presentation of thesis and antithesis, a

kind of antinomy, which at once recalls to mind those formulated by Kant. For instance, he obtains his primary category, Relation, by a synthesis of distinction and identification which constitutes determination. The category of Quantity or Number is the synthesis of the "one" and the "many" in the form of the "whole." It is easy to be misled by these abstractions, and Renouvier emphasizes this in his careful warning, "One must not forget that thesis and antithesis have no meaning apart from each other or outside the synthesis which unites them." No thing is "one" rigorously, nor, on the other hand, is it multiplicity without unity, but each thing can be represented as a whole.

Although the Categories are based upon a synthesis of mutually exclusive terms, the fact that these terms have no reality in themselves apart from one another, prevents the Categories giving rise to antinomies.

THE LIMITS OF KNOWLEDGE

Having equipped ourselves with a list of Categories, we are at once tempted to set about experimenting upon the world with them. Do they help us to understand the Universe? If they embrace all the fundamental laws of phenomena, is it not natural to expect that, when applied to the world as a whole, they will give us a unique and universal synthesis of all phenomena? This question Renouvier sets himself to discuss at the conclusion of his *Logic*. The student of Kant will be on the alert for Renouvier's encounter with those dragons in the path of the systematic philosopher—Antinomies. Some reference to these has already been made, where we saw that the Categories themselves involved the synthesis of two mutually exclusive elements. The synthesis, Renouvier insisted, is more real than the elements, which, in separation or abstraction, are meaningless.

In approaching a discussion of the application of his categories to the world (or universe), Renouvier is careful to point out at the beginning that the world is itself a synthesis. He defines it as a synthesis of phenomena, objects of experience possible to some consciousness. It is the totality of all the relations composing the representation, objective, subjective, present, past, or even future, all-embracing to such a degree that nothing can be distinguished as outside, before, or after it. He gives the name Universe or All-being, All-Existence (Tout-Être) to this vast synthesis, which includes all that is popularly understood by the terms World, Universe, Nature, or the more imposing name God (as used by Spinoza). We conceive of this Whole by the power of our Reason according to Kant, but Renouvier calls this Reason the Law of Universality. By showing that the terms united in the synthesis of his Categories have no existence independent of that synthesis, Renouvier avoids

raising antinomies within the Category-system itself. Graver difficulties present themselves on the application of the Categories themselves to the Whole.

Let us consider, for example, the Category of Relation. We may say that the universe, being a synthesis as defined, can be called a Relation, but we must note that it is not itself in relation with anything else, for there is nothing outside it or superior to it. It is itself the Grand Totality of all relations, unconditioned by anything other than itself. Now, of the unconditioned we have no experience; everything for us is relative and conditioned by its relationships with other things. Thus the Universe falls outside the categories, for it falls outside our experience. The total of phenomena as objects of possible experience surpasses that experience.

Further, with regard to the Category of Number, the World is the Whole, and consequently is incapable of being compared to anything else or measured by anything outside it. Yet when we represent it to ourselves as defined we conceive it to be a synthesis capable of numerical expression—so many living things, so many stars, although this number be unknown to us and actually too immense for our imagination to conceive. Considering all the Categories, we find the same kind of difficulty. They are inapplicable to the whole, for the whole as such is outside our experience. "The Universe remains as something indeterminate, and by reason of that very indetermination we are constrained to regard it as infinite in plurality, infinite in space, infinite in time, infinite in species, or in other words as without number, without extent, without duration, without quality, devoid of origin, cause, end, or consciousness."

But endeavouring to recast our arguments in another way, we recollect that we defined the world as a synthesis of all relations, laws, and functions. The world is a whole, and no whole of a composite nature is formed of parts without end; moreover, all phenomena, however large, can be expressed by some number, a finite number, for an infinite number is nonsensical. The World is a becoming, a moving series of phenomena, but, however vast the series, it must have a first term and a last term—the longest cinema film with its tens of thousands of pictures has an initial one and a final one. The series of cause and effect is not an infinite one, and finality expresses itself as achieving some goal or end "to which the whole creation moves," and the final outcome in the progress has been the arrival and progressive development of personalities.

Obviously these considerations are diametrically opposed to the previous ones, and we are thus presented with "a system of antinomies apparently insoluble. (These antinomies do not here present themselves as resulting from the decomposition of syntheses already established for knowledge.) They are real pairs of propositions

between which one is obliged to choose (*opter*). If their foundations are equally *unassailable*, the principle of contradiction perishes, and with it Science itself.

Renouvier, like his great predecessor, finds himself faced with antinomies. Just as he grappled with the seemingly logical antinomies within the Category-system itself, he endeavours to cut the Gordian-knot of these cosmological contradictions. As against the arguments of infinity, he establishes those of a finite Universe, limited in space and time. The infinite, the absolute, the unconditioned are of the same class as the thing-in-itself, to be rejected as meaningless and misleading terms, chimeras of the human imagination. Consequently, "there do not exist real antinomies." Renouvier's position is, that opposites cannot be reconciled; one or the other must be rejected. Renouvier thus made the law of contradiction the basis of his philosophy, as it is the basis of our principles of thought or logic.

He rigorously applied this principle to that very interesting part of Kant's work, the antinomies, which he held should never have been formulated. The reasons he put forward for this statement are two, the principle of contradiction and the law of number. Renouvier did not believe in what mathematicians call an "infinite number." He held it to be an absurd and contradictory notion, for to be a number at all it must be numerical, and therefore not infinite. "A number greater than any assignable number is no number at all."

"It is true that, in an abstract manner, we can always present to ourselves a number greater than an assigned number, whatever it be, but this indefinite possibility does not in the least prove that no limit exists to the numerical order of phenomena." To ask, "Why that number?" is to ask a question on a par with the queries, "Why phenomena, why the world at all?"¹

The application of this to the Kantian antinomies, as, for example, to the questions, "Is space infinite or finite? Had the world a beginning or not?" is interesting, because it treats them as Alexander did the Gordian-knot. The admission that space is infinite, or that the world had no beginning, involves the admission of "an infinite number," a contradiction and an absurdity. Since, therefore, such a number is a pure fiction, we *must* logically conclude that space is finite, that the world had a beginning, and that the ascending series of causes has a first term, which admission involves liberty at the heart of things.

As we can think of nothing save in relation to consciousness, and consequently we cannot conceive the Universe apart from personality, our knowledge of the Universe, our philosophies, our beliefs are

¹ On the many puzzling questions of Time, the reader may consult the writer's recent volume, *The Problem of Time* (Allen and Unwin Ltd.).

"personal" constructions. They need not be subjective and individualistic, for they refer to personality in its wide sense, a sense shared by other persons. This has important consequences for the problem of certitude in knowledge and Renouvier has here certain affinities to the pragmatist standpoint.

His discussion of certitude is in large manner bound up with his treatment of the problem of freedom, but we may indicate here Renouvier's attitude to Belief and Knowledge, a problem in which he was aided by the work of his friend, Jules Lequier,¹ whom he quotes in his second *Essai de Critique générale*. Renouvier considers it advisable to approach the problem of certitude by considering its opposite, doubt. In a famous passage in his second *Essai* he states the circumstances under which we do not doubt, namely, "when we see, when we know, when we believe." Owing to our liability to error (even seeing is not believing, and we frequently change our minds even about our 'seeing'), it appears that belief is always involved, and more correctly "we believe that we see, we believe that we know." Belief is a state of consciousness involved in a certain affirmation of which the motives show themselves as adequate. Certitude arises when the possibility of an affirmation of the contrary is entirely rejected by the mind. Certitude thus appears as a kind of belief. All knowledge, Renouvier maintains, involves an affirmation of will. "Every affirmation in which consciousness is reflective is subordinated in consciousness to the determination to affirm." Our knowledge, our certitude, our belief, whatever we prefer to call it, is a construction not purely intellectual but involving elements of feeling and, above all, of will. Renouvier here not only approaches the pragmatist position, but he recalls the attitude to will, assumed by Maine de Biran. For the Cartesian formula de Biran had suggested the substitution of "Volo, ergo sum." The inadequacy of the "Cogito, ergo sum" is remarked upon by Lequier, whose treatment of the question of certainty Renouvier follows. As all demonstration is deductive in character and so requires existing premises, we cannot expect the "première vérité" to be demonstrable. If, from the universal doubt of Descartes, we are to reach any belief or certainty, we must turn to the will to create belief, for no evidence or previous truths exist for us. The "Cogito, ergo sum" really does not give us a starting-point, as Descartes claimed for it, since there is no proper sequence from "cogito" to "sum." Here we have merely two selves, "moi-pensée," and "moi-objet." We need a live spark

¹ Cf. the very interesting remarks by Renouvier at the end of the first volume of his *Psychologie rationnelle* (1912 ed., pp. 369-93) on Lequier and philosophy; also the fragments reprinted by Renouvier in that work, "Comment trouver, comment chercher" (vol. i), on Subject and Object (vol. ii) and on Freedom.

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to bridge this gap to unite the two into one complete living self; this is found in "moi-volonté," in a free act of will. This free act of will affirms the existence of the self by uniting in a synthetic judgment the thinking-self to the object-self.

In the assertion of any certitude there must be a combination of these three great functions of human nature. Certitude which has any meaning for us, which is not a mere abstraction, a chimera, detached from human nature, is a result of the working of all three elements, intellect, feeling, and will. It is not, and Renouvier insists strongly upon this point—and it is one which shows us this thinker taking a broader stand than many of his extremely logical and rigorous attitudes would lead us to expect—a purely intellectual product; elements of feeling and will enter into all judgments, and the part they play in the psychology of belief, in the construction of that state of consciousness which we term certitude, is not to be overlooked. "I refuse," says Renouvier, quoting Lequier, "to follow the work of a knowledge which would not be mine. I accept the certainty of which I am the author." The "première vérité" is a free and personal act of faith. Certainty, in philosophy or in science, reposes ultimately upon freedom and the consciousness of freedom.

A caveat may be entered here. Renouvier is inclined to underrate the objectivity of knowledge, to make it a *creation* of the mind rather than a *discovery* by the mind.

FREEDOM

The second of the *Essais de Critique générale* bears the title *Traité de Psychologie rationnelle d'après les Principes du Criticisme*. The work might be more aptly described as a study of Man and his Beliefs, for having discussed many of the problems which one usually finds in psychological text-books, Renouvier attacks the problem of Man as a free agent; then passing from Freedom he takes up the question of Certitude, and finally deals with Man's belief in God and Immortality. The whole essay, particularly the second volume, is of extreme importance to the student of Renouvier's thought, which here appears at its best.

This essay is intimately connected with the first treatise on logic—a fact which is apparent at once in the first part, where Renouvier discusses Man and his nature with particular reference to the list of categories formulated in the First Essay.

Man is the meeting-place of all the categories. They embrace all that he knows or can, by his nature, have knowledge of; they also constitute his nature, and in him is found that supreme category, Personality, in which they all culminate. With Personality are bound up Causality and Finality (Purpose). "Thus when we regard

man from the standpoint of cause, a cause which is conscious of itself and of its actions, we have Will: Man is Will. When we consider him from the standpoint of his striving to an end or purpose, we have passion: Man is Passion. When we consider the various functions of his person as it were deflected by a reduplication of consciousness, we have understanding and reason: Man is Intelligence."¹ One may regard Man from the standpoint of any category, but he embraces all of them. Man or Human Nature is, then, "a function of all the functions which fall under Knowledge," a remark which may be set alongside the statements in the First Essay.

Renouvier is a notable champion of freedom. We have already seen the importance he attaches to the category of personality. For him personality represents a consciousness in possession of itself, a free and rational harmony, in short, freedom personified.

From a strictly demonstrative point of view, Renouvier thinks it is impossible to prove freedom as a fact. However, he lays before us with intense seriousness various considerations of a psychological and a moral character which have an important bearing upon the problem. This problem, he asserts, not only concerns our actions but also our knowledge. To bring out this point clearly Renouvier develops some of the ideas of his friend Jules Lequier on the notion of the autonomy of the reason or rather of the reasonable will. In this way he shows doubt and criticism to be themselves signs of freedom, and asserts that we form our notions of truth freely, or that at least they are creations of our free thought, not laid upon us by an external authority.

More light is thrown on the problem by considering what Renouvier calls "vertige mental," a psycho-pathological condition due to a disturbance of the rational harmony or self-possession which constitutes the essence of the personal consciousness. This state is characterized by hallucination and error. It is the extreme opposite of the self-conscious reflective personality in full possession of itself and exercising its will rationally. Renouvier shows that between these two extremes there are numerous planes of "vertige mental" in which the part played by our will is small or negligible, and we are thus victims of habit or tendency. Is there, then, any place for freedom? There most certainly is, says Renouvier, for our freedom manifests itself whenever we inhibit an action to which we are excited by habit, passion, or imagination. Our freedom is the product of reflection. We are at liberty to be free, to determine ourselves in accordance with higher motives. This power is just our personality asserting itself, and it does not contradict our being, more often than not, creatures of habit. We have it in our power to make fresh beginnings. Renouvier's disbelief in strict continuity is here again

¹ *Psychologie rationnelle*, vol. i, p. 5.

apparent. We must admit freedom of creation in the personality itself and not seek to explain our actions by trying to ascend some scale of causes to an infinite. There is no such thing as a sum to infinity of a series; there is no such thing as the influence of an infinite series of causes upon the performance of a consciously willed act in which the personality asserts its initiative, that is, its power of initiation of a new series, in short, its freedom.

Passing from these psychological considerations, Renouvier calls our attention to some of a moral nature, no less important in his opinion for shedding light upon the nature of freedom. For a proper understanding of the nature of this problem "we are obliged to turn to the practical reason. It is a moral affirmation of freedom which we require; indeed any other kind of affirmation would, Renouvier maintains, presuppose this. The practical reason must lay down its own basis and that of all true reason; for reason is not divided against itself; reason is not something apart from man; it is man, and man is never other than practical, *i.e.* acting."¹ Considered from this standpoint, there are four cases which present themselves to the tribunal of our judgment, namely, the case for freedom, the case against freedom, the case for necessity, and the case against necessity.

The position is tersely put in the *Dilemma* presented by Jules Lequier. There are four possibilities:—

1. To affirm necessity, necessarily.
2. To affirm necessity, freely.
3. To affirm freedom, necessarily.
4. To affirm freedom, freely.

When examining these possibilities we find that to affirm necessity, necessarily, is valueless for its contradictory, freedom, is equally necessary. To affirm necessity, freely, does not offer us a better situation, for here again it is necessity which is affirmed. If we affirm freedom, necessarily, we are in little better case, for necessity operates again (although Renouvier notes that this gives a certain basis for morality). In the free affirmation of freedom, however, is to be found not only a basis for morals, but also for knowledge and the search for truth. Indeed, as we are thus forced "to admit the truth of either necessity or freedom, and to choose between the one and the other with the one or with the other,"² we find that the affirmation of necessity involves contradiction, for there are many persons who affirm freedom, and this they do, if the determinist be right, necessarily. The affirmation of freedom, on the other hand, is free from such an absurdity.

Such is the conclusion to which Renouvier brings us after his wealth of logical and moral considerations. He combines both in

¹ *Psychologie rationnelle*, vol. ii, p. 78.

² *Ibid.*, vol. ii, p. 138.

order to undermine the belief in determinism and to uphold freedom, which is in his view the essential attribute of personality and of the universe itself, which is pluralistic, not monistic, and manifests real beginnings, discontinuities which even Science or rather the sciences cannot overcome.

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In examining Positivism in his work *Histoire et Solution des Problèmes métaphysiques*, Renouvier points out that its initial idea is a false one, namely, that philosophy can be constituted by an assembling together of the sciences.¹ Such an assembly does not, he objects, make a system. Each science has its own postulates, its own data, and Science as a whole unity of thought or knowledge does not exist. He attacks at the same time the calm presumption of the positivist who maintains that the scientific stage is the final and highest development. Renouvier is considerably annoyed at this unwarranted dogmatism and assumed air of finality.

An important section of his Second Essay, *Psychologie rationnelle*, deals with the classification of the sciences.² Renouvier there points out that the attempt to classify the sciences in accordance with their degrees of certainty is not possible. All of them, when loyal to their own principles, endeavour to display equal certainty. By loyalty Renouvier shows that he means adherence to an examination of certain classes of phenomena, the observation of facts and laws, with the formulation of hypotheses, put forward frankly as such. He draws a line between the logical and the physical sciences—a division which he claims is not only a division according to the nature of their data, but also according to method. Following another division, we may draw a line between sciences which deal with objects which are organic, living creatures, and those which are not.

Renouvier's line is not, it must be remembered in this connection, a purely imaginary one. It is a real line, an actual gap. For him there is a real discontinuity in the universe. Taine's doctrine of a universal explanation, of a rigid unity and continuity, is for Renouvier anathema: "C'est la mathématisation à l'outrance." This appears most markedly in the pages which he devotes to the consideration of "la synthèse totale."

An important section of his *Traité de Logique* (the first *Essai de Critique générale*) deals with the problem of this Total Synthesis of

¹ Book X, *De l'État actuel de la Philosophie en France*. Chap. I, "De l'Aboutissement des Esprits au Positivisme," pp. 416-17.

² Vol. II, chap. xvii: "De la Certitude des Sciences et leur Classification rationnelle," pp. 139-86, including later observations on Spencer.

all phenomena.¹ This is a conception which Renouvier affirms to be unwarrantable, and indeed impossible. A general synthesis, an organization or connected hierarchy of sciences, is a fond hope, an illusion only of a mind which can overlook the real discontinuity which exists between things and between groups of things. He sees in it the fetish of The Absolute and The Infinite and the lure of pantheism, a doctrine to which he opposes his "Personnalisme." He reminds the scientists that personality is the great factor to which all knowledge is related and all knowledge is relative. A law is a law, but the guarantee of its permanence is not a law. It is no more easy, claims Renouvier, to say why phenomena do not stop than it is to know why they have begun. Laws indeed abide, but "not apart from conscious personalities who affirm them."² Further attacking the self-confident and dogmatic attitude in the scientists, Renouvier reminds them that it is impossible to demonstrate *every* proposition, and in an important note on "Induction and the Sciences"³ he points out that induction always implies a certain "croyance." This is no peculiar, mystical thing; it is a fact, he remarks, which colours all the interesting acts of human personality. He here approaches Cournot in observing that all speculation is attended by a certain coefficient of doubt or uncertainty, and so becomes really rational belief. With Cournot, too, Renouvier senses the importance of analogy and probability in connection with hypotheses in the world of nature and of morals. In short, he recognizes as central the problem of freedom.⁴

Renouvier attacks Comte's classification or "hierarchy" of the sciences as mischievous and inexact. It is not based, he claims, upon any distinction in method, or of data. It is not true that the sciences are arranged by Comte in an order in which they successively imply one another, or in an order in which they have come to be constituted as "positive."⁵

He justifies to the scientist the formulation of hypothesis, as a necessary working method of co-ordinating, in a provisional manner, varying phenomena. Many hypotheses and inductions of science are, however, unjustifiable from a strictly logical standpoint, Renouvier reminds us. His chief objection, however, is that these hypotheses and inductions are put forward so frequently as certainties, by a science which is dogmatic and surpasses its limits.

¹ Vol. i, pp. 107-15, and also vol. ii, pp. 202-45.

² *Logique*, vol. ii, p. 321.

³ Note B to chap. xxxv of the *Logique*, vol. ii, p. 13.

⁴ For Cournot's ideas and the parallel between his thought and that of Renouvier, see the writer's book *Modern French Philosophy*.

⁵ This outburst of attack is a sample of Renouvier's usual attitude to positivism. *Deuxième Essai*, vol. ii, pp. 166-70.

Science, Renouvier claims, does not give us a knowledge of the Absolute, but an understanding of the relative. It is in the light of his doctrine of relativity and the application of the law of number that he criticizes many of the attitudes adopted by the scientists. Whatever savours of the Absolute or the Infinite he opposes, and his view of cause depends on this. He scorns the fiction of an infinite regress, and affirms real beginnings to various classes of phenomena. Causality is not to be explained, he urges in his *Nouvelle Monadologie*, save by a harmony. He differs from Leibnitz, however, in claiming in the interests of freedom that this harmony is not pre-established. Renouvier does not fear science when it confines itself to its proper limits and recognizes these. It has no quarrel with philosophy, nor philosophy with it. Advance in science involves, he believes, an advance also in theology and in metaphysics.

The sciences are responsible for working out the laws *determining* or conditioning the development of the Universe. But between Science, an ideal unachieved, and the sciences which in themselves are so feeble, imperfect, and limited, Renouvier claims that General Criticism—or Philosophy—has its place. "In spite of the discredit into which philosophy has fallen in these days, it can and ought to exist. Its object has been always the investigation of God, man, liberty, immortality, the fundamental laws of the sciences; all these intimately connected and interpenetrating problems comprise the domain of philosophy." In those cases where no science is possible, this seeming impossibility must itself be investigated, and philosophy remains as a "General Criticism" (*Critique générale*) of our knowledge. "It is this notion which I desired to indicate by banishing the word 'philosophy' from the title of my Essays. The name ought to change when the method changes."¹ Thus Renouvier seeks to establish a "critique" midway between scepticism and dogmatism, and endeavours to found a philosophy which recognizes at one and the same time the demands of "science et conscience," the Pure Reason and the Practical Reason.

Renouvier did not entirely succeed in his ambitions, and, as has been pointed out in the first of these articles, he had few readers, and might well have been discouraged from continuing to think and write so much until his death in his eighty-ninth year. Since his death in 1903 more attention has been given to his work, and in the last ten years Histories of Philosophy have included some paragraphs or sections about him. Incidentally, too, the *Encyclopædia Britannica* has, in its last edition, discovered the correct date of his birth.

The *Essais de Critique générale* form only a part of his immense

¹ *Logique*, vol. ii, p. 352.

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output. "Liberty" and "Personality" he carried as his watchwords into the other fields to which he contributed, namely, ethics, social philosophy, history, eschatology, and fiction. (For his *Uchronie* is a fiction written to show that the history of Europe *might* have been other than it is, and his *Personnalisme* cannot be described as other than eschatological.) Renouvier was a rather obstinate and argumentative philosopher, by no means unexposed to serious criticism (so serious, indeed, that it cannot be indulged in within the limits of such an article as this). However, he is none the less worthy of considerable attention from English students. There is much more depth and extent in his work than in the better-known French thinkers, Comte and Bergson, and some would say that he is France's greatest philosopher since Descartes. In spite of his differences from the great German, he might deservedly be styled "The French Kant."

(Concluded)

THE OBSEQUIES OF REALISM

PROFESSOR JOHN LAIRD

It is the custom, nowadays, to say that "realism" is very dead indeed, and to speak of it invariably in the past tense, or only in the historical present. What happened, we are told, was that, during the first quarter of the twentieth century, two distinct bodies of men propounded either "naïf" or "new" realism. The naïf realists followed Mr. G. E. Moore—to some extent and without his consent; and they were called naïf (by some misogynist) because the masculine form of the adjective expressed their rugged creed better than the more usual feminine form. (They were *esprits forts* rather than *esprits fins*). The "new" realists, on the other hand, were an American body with a "programme" decidedly different from that of the naïf realists. The base of their operations was William James's contention that, in some important sense, "consciousness" did not exist. Most of them were, in fact, "neutral monists." But time has slain "naïf" and "new." The corpses of both have been sent to the dissecting rooms for the instruction of beginners in morbid anatomy.

Now, being one of the smaller corpses in this collection, I take a certain interest in seeing my name in the obituary columns, and in reading the obituary notices of the more eminent corpses that surround me. It is pleasant to see the historical process at work, and to watch the legends sprouting. Indeed, in many ways, it is very pleasant to be dead; but sometimes I confess to a faint surprise. I and my companions must assuredly be dead, because nearly everybody says so. But where, when, and how did we succumb? It seems to me sometimes that we must have died of fright, for I do not see why we should have been hurt very much by most of the missiles that were hurled against us. And since most of these missiles were boomerangs, it is difficult for me to see why we should, at present, be alone in the dissecting rooms.

In this paper, then, I propose to consider some of the things that contemporary historians say about our demise, and the reasons for it. I cannot, of course, examine all that they say. Instead, with an irresponsibility appropriate to the defunct, I shall confine myself to some of it only; and if anyone chooses to say that my last hope is the editor's whistle, I shall not try to gainsay him. But I am prepared to agree with Mr. Lovejoy in his recent book¹ (*e.g.* p. 257) that philosophy should be concerned, very largely, with merely

¹ *The Revolt Against Dualism.*

hypothetical questions. It is the business of "realists," as of other philosophers, to consider "what sort of propositions properly go together." The critics of realism, self-declared victors in the struggle, maintain that "realism" of the sort that is now dead "properly went together" with a number of specific propositions each of which was completely untenable; and I want to consider whether certain assignable absurdities of this kind must in fact keep company with realism, and therefore destroy its credit. I shall try to consider important propositions of this kind, and these only; but I may, of course, be mistaken in my estimates of "importance," and my selection may also be very arbitrary.

First, however, I must say something about the meaning of "realism."

No philosopher, probably not even a sceptic, is intentionally an *unrealist*; and it is not a very hopeful philosophical proceeding to assign certain characteristics to "reality" and then to say that everything that does not have these characteristics is "unreal." No doubt materialists used to say that only "matter" had the sort of permanence that "reality" must have. Spiritualistic philosophers said that only spirit had the sort of unity that the "real" must possess. Transcendentalists said that only the supersensible could be impervious to vicissitude in the way that all "reality" must be impervious. All these philosophers, however, found very great if not insuperable difficulties in explaining the status of what, according to their philosophies, was *not* real, and yet was, or seemed very stubbornly to be, a set of facts that had to be accounted for. Therefore they had either to choose the desperate expedient of saying that there were certain *unreal* realities (although not *so* real as some others), or else, more reasonably, had to say that these apparent facts were not what they seemed.

In short, such questions have to be approached from the standpoint of "knowledge" (where "knowledge" does not mean "knowing for certain" as opposed to mere "thinking," but is intended to describe every mode or variety of cognitive apprehension). Everything, we may say, that is apprehended, or that is believed to be apprehended, appears such-and-such, and may be held (with some slight vestiges of metaphor) to claim to be, or to proclaim or reveal itself as being, such-and-such. If it *is* what it claims to be, it is "real," *i.e.* is really what we take it to be. If not, it is "unreal," because, in some way, erroneous, imaginary, or fictitious.

To be sure, such statements themselves require elucidation; and the dead theory, now commonly called naïf realism—with which alone I shall be concerned during the rest of this discussion—did in fact proceed upon a special analysis (disputable, no doubt, like every other analysis) of what was meant by "apprehending" and

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by the "claim" of an object to be such-and-such. The governing intention of this special realistic analysis was that if anyone apprehends x as being so-and-so, he implies, unless his apprehension is misapprehension, that x is so-and-so irrespective of his apprehending process, provided (a) that x does not reveal itself as that specific process of apprehending, or (b) as a product, or part-product, of that specific process. Since there seem to be many entities which do *not* proclaim themselves to be either apprehensions or products of apprehension, a realistic philosophy will accept this rejection of any claim of apprehension to constitute or produce *such* entities, and will take its opponents to mean that the process of apprehending does in fact constitute or produce (at least in part) such entities, although *prima facie* it does not seem to do so.

Further explanations, however, seem to be necessary; for "apprehension" is a vaguish term which may be construed in different ways. (It might, for instance, be held to include representative as well as non-representative acquaintance.) What is called naïf realism, then, maintained that (at any rate) *certain* entities could be inspected non-representatively—if, indeed, it did not even maintain that everything that was known, unless it were itself an inspection, was either inspected non-representatively or could be shown in detail to be simply a function of entities so inspected. And the principal interest that attached to this type of theory—in those old days when people *were* interested in it—had regard to the particular things, facts, or events which, according to the naïf realists, could be, and were, inspected in this non-representative fashion.

Much of the debate turned upon the status of the objects of sense-perception. Indeed, the discussion showed a tendency to stick there, although (of course) its analysis of sense-perception was only a part of realistic theory. And in the present discussion I shall not try to consider anything except sense-perception.

Perception, pretty clearly, appears to be an apprehension of fact. What kind of fact, then, do the objects of perception (if we may legitimately use such language) "claim" to be? What did naïf realists say this "claim" was? Were they right about the "claim," and could they defend it? These are the questions I want to ask, confining myself, however, to certain specific parts of the "claim," and to the absurdities, in these particular respects, which, according to present-day critics, stultified and destroyed naïf realism.

I. TIME

The following argument is frequently supposed to have annihilated naïf realism: Whatever we perceive is plainly *present*, and

therefore if we see a star or hear a sound we must perceive such entities as present. In reality, however, it can be demonstrated that these "objects" are always *past*. We do not hear sounds until slow-travelling sound-waves reach our ears, and by the time the sound reaches our ears, the sonorous event, at the place of its occurrence, may very well have ceased to exist. Similarly, since light, although quick, still takes time to move, the star we *now* see may have been extinct for centuries; and therefore what we *now* see would, at the best, be a phase of it at the time the rays which now affect our eyes began their vast journey. Indeed, since nervous conduction is not so fast as the Cheltenham express, there is always a slight lag in time between the excitation of our sense-organs and the critical occurrence in the cortex or optic thalami.

It has sometimes been contended, I believe, that although the star I say I perceive *now* may have been extinct for some hundreds of years, nevertheless I might conceivably perceive its *present* state; but I confess I cannot regard this view as even remotely intelligible. I agree, then, that if the star I say I see *now* is what naïf realism said it was, what I now see must be a *past* and not a present event, just as, if the representative theory of perception is true, all I should be justified in doing in the instance of the star would be to represent the *former* existence of the star (which may now be extinct).

The question for naïf realism, therefore, was whether it is either nonsensical or quite absurdly opposed to experience to say that we may and constantly do perceive *past* events "directly"; and I want to suggest that there is no absurdity whatsoever, or any proper opposition to experience, in this opinion. Perception, I agree, is *defined* (in opposition to memory or to expectation) as "present"; but although the perceptual process is, by definition, "present," it does not follow that its object, the perceived event, is present; and if it could be shown that the perceived event is always past, no internal contradiction of any sort whatsoever is thereby laid bare. No doubt we commonly tend to suppose that whatever is perceived is contemporaneous with the perceptual act, and therefore suppose and say that the (apparent) sun is present because we are seeing it at present; but the experienced fact is simply that we see it now, not necessarily that it exists now; and realistic theory was not refuted by a certain negligence of common speech in this affair. Indeed, judgments of simultaneity, *i.e.* of the absence of temporal interval, may very well be complicated according to any tenable theory; and if the presentness of our own *experiencing* is the only "present" that is *given* in sense-perception, the circumstance might be legitimately accepted by naïf realism as well as by any other theory.

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What the critics of naïf realism persistently assume is that whatever is *now* perceived (*e.g.* the apparent sun) must be a *present phenomenon*. Hence they argue that since the real sun at the moment of perception must be the sun of eight minutes earlier, it follows that the apparent sun (a present phenomenon) must be *different* from the real sun (eight minutes earlier). The phrase "a present phenomenon," however, is ambiguous, and all that need be meant by it is "an entity which is *now* revealed," *i.e.* whose apprehension exists now. The date of the phenomenon, relatively to the apprehension of it, might very well, in terms of this definition, be a subject for further investigation. Let it be granted that we experience the "feel" of presentness in our own private tempo, that we are acquainted with the signs of orderly succession (*i.e.* time) both in our own tempo and in the vicissitudes of the phenomena (not ourselves) which we perceive, and that we have sufficient reason for believing that it is possible to correlate our own tempo and the tempo of sun and shadow in such a way as to have an intelligible standard of time. It does not follow, surely, that in every act of perception, even a baby's or a drunkard's, all the proper inferences concerning simultaneity are instantaneously apprehended, either according to an absolute or according to a relative theory of time.

I am not saying, of course, that when we "directly" perceive a sun of eight minutes ago, we are *remembering* that object (or, in short, that all perception is memory). I believe, indeed, that no account of memory is even approximately adequate unless it admits that when I remember *now*, the past event, said to be remembered, *itself* confronts the remembering mind, not, of course, because it continues to be present (for it does not), but because what has been may still be apprehended. (I can only deplore the state of mind of those critics who suppose themselves to be making an objection even apparently relevant when they gravely point out that if I remember Queen Victoria it is nonsense to suppose that I have any perceptual acquaintance with her present dust.) But memory only occurs when we apprehend a past event *and are also aware that we have experienced it before*; and what I have said about the very distant star and about the rather distant sound is that on the first and on every other occasion on which they are apprehended they are already past. There is no question of previous personal experience, *i.e.* of memory, at all.

II. SPACE

Certain general considerations regarding this question apply to naïf realism as well as to all other theories.

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(1) Although organic sensa are sensibly voluminous, sight and touch are by far the clearest senses with respect to perceptible figure and volume. A preliminary discussion, therefore, should concern itself principally with these.

(2) *Such* percepts always are perceptibly extended. If extension is not one of their properties, there is no good reason for supposing it to be a property of anything.

(3) Nevertheless, extensional properties are principally relational within any visual or tactual field.

(4) And when we speak of a visual or of a tactual field, we are using language that needs some explaining, for—

(a) it is generally held that perceptible spatial *order* is largely “acquired” and matter of “association” and “interpretation.” To be sure, it is not at all plausible to maintain that such acquired or interpretative meaning could conceivably be generated from what is originally spaceless; and realists usually hold (and probably should hold) that so-called “acquired meaning” is for the most part *progressive discovery*. Realists need not assert, however, that exactly the same spatial properties are “given” to babies, to the blind, to dogs and beetles, as to those men and women who, as we say, have learned to use their eyes and their fingers.

(b) When we speak of “space,” it seems likely, on any theory, that the word conceals a good deal that needs careful explanation. Naïf realists certainly maintained that “up and down,” “right and left,” approximate “straightness” and approximate “circularity,” are directly perceptible, and that a certain orderly spatial context is also perceptible in every phenomenon of sight or of touch. But if by “space” we mean *one* spatial order of the universe, then, even apart from problems of relativity, we are plainly speaking about something that could *never* be perceived in its integrity, and that must have very complicated relations to what we do perceive at any time. In general, at any rate in pre-relativity days, what was held was that non-deformable pieces of matter might be moved about, placed end to end, etc., and that “space” was the cosmic theatre within which ideally non-deformable pieces of matter might be fitted with ideal precision. But “space” in that sense was a theory and a policy rather than a visible or tangible fact.

(c) While Berkeley’s doctrine that “sight space” and “touch space” have nothing at all in common seems clearly untrue—for the two have at least a close natural correspondence which is not arbitrary—the statement that what we see and what we touch may occupy “the same” space need not, on any theory, be regarded as simple and uncomplicated. Even for representative non-realistic theories the abstract imperceptible “space” that corresponds, with accuracy, *both* to sight and to touch takes a good deal of ex-

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plaining in detail. If, therefore, naïf realists have to say, like other people, that a visual inch added to a tactual inch does not yield a *perceptible* line of two inches, there is nothing astonishing in the admission.

These preliminary points being assumed, where precisely did naïf realism meet disaster?

(1) Naïf realists did not say that "pure" or "absolute" space (if there was such a space) was directly perceptible. What they did claim to perceive was soldiers moving to the *left* in file, with their helmets *on* their heads, and such-like spatial relations. The relations of such perceived spatial facts to a cosmic order of space was for them a delicate question just as it was for anyone else.

(2) They did not assert that any man's normal space-perceptions directly revealed the "relative" space of modern physics, *i.e.* relativity to various astronomical axes with or without the necessity for specifying time-co-ordinates also (even if they did assert that men may see the stars themselves). Such elaborate inferences and constructions, on a realistic as on any other theory, can never be an affair of direct perception, although, on any theory, they must be based upon the data of perception.

(3) On the other hand, realists did assert that we see figures outside our own bodies, and touch shapes which (although contiguous to) are nevertheless outside our organs of touch.

This seems a modest assertion. Visible typewriters certainly seem to be outside our visible bodies, and similarly of touch. Again, if the typewriters that we see (*i.e.* those visually perceptible surfaces) are *not* outside our bodies, they must either be inside our bodies (most plausibly inside our heads) or else nowhere.

Apparent or "phenomenal" typewriters can hardly be said to be inside our *phenomenal* heads. On the contrary, phenomenal typewriters are phenomenally *outside* our phenomenal heads, just as "real" typewriters must be outside our "real" heads if there is any spatial "reality" in "heads" and in "typewriters" at all. No doubt it may consistently be asserted that phenomenal typewriters are inside our real heads, and that there is an inferable correspondence between the phenomenal typewriters inside our real heads and the real typewriters outside our real heads, as well as between the phenomenal heads inside our real heads and the real heads themselves. For this remarkable theory, however, the only reason that seems to be given is that our brains must be stimulated if we are to perceive at all; and this, so far as I know, was never denied by any naïf realist whatsoever.

If, in the alternative, we were to say that the visual typewriter and the tactual typewriter are actually *nowhere*, the most plausible way of explaining the paradox would be to say that these visual

and tactual entities, although extended, occupy no position in physical space. It is agreed, as we have seen, that the order of "physical" space is largely inferential and constructional on any theory, and that it is often conveniently vague. These concessions, however, apply to all theories alike; and the critics of realism may reasonably be asked how they *know* that visual or tactual phenomena could not occupy any position in physical space.

Their argument is to the following effect: Even if I could suppose, without contradiction, they say, that the books on my shelves are, as they seem to be, about five feet outside my body as I write, such statements could not possibly be true of *much* that I take myself to perceive. For the sun appears to be on the horizon at sunset, and the limit of what is visible at the horizon (to a man standing, say, on the seashore) is only a few miles distant. The sun, however, is many millions of miles away. Therefore the place where it appears to be (*i.e.* on the horizon) could not possibly be the place where it really is. In general, therefore, we must always deny any simple identity between the place where a visual surface appears to be and the place where, physically speaking, it really is.

This argument, I confess, does not impress me. Granting that when the sun is in line with the horizon of the sea we see nothing *between* the horizon of the sea and the sun, it does not follow, surely, that the visible sun is visibly *at the same distance* as the horizon of the sea. For if we did perceive the ninety-million-miles distant sun in that relation to the horizon of the sea, there would *not* be anything visible between sun and horizon. Such arguments, so far as I can see, could refute naïf realism only if naïf realists maintained not only that distance and other spatial relations may be directly perceptible (sometimes with considerable accuracy), but that all such relations are *infallibly* apprehended, with nothing to go upon except the bare perceptible distance of what is perceived; and I propose to show that the alleged reasons for holding that naïf realists must either claim perceptual inerrancy in these matters or else propound a meaningless theory are entirely mistaken.

No doubt there is an enormous range of instances of this type; and it may be true that naïf realists have hitherto failed to account for any considerable proportion of these instances, although that was precisely their business in a long innings. Even so, however, a new generation of realists (if such a resurrection were possible) might be successful. And I should like to make one small suggestion on this question, although I know very well how small it is.

A serious difficulty in the way of "realism" would seem to be that sight-space and touch-space are phenomenally so very different, and that, for example, objects do not appear to grow smaller as they recede in a blind man's world, although visually they seem

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to do so. And *some* intelligible meaning, however remote from the blunt and slap-dash brevity of the words, must be given to the statement that what we see and what we touch, if real and independent of our perception, must be "in the same place."

My small suggestion would be that no naïf realist need maintain that when he sees or touches a "thing" he sees or touches the *whole* of that thing, or even the whole of its surface. Let it be granted, at least hypothetically, that both sight and touch are highly selective, and that visual and tactual puncta (meaning by the terms small areas, and not unextended points) need not be identical in location. In that case, supposing that sight were confined to visual and touch to tactual puncta, the reason why there should appear to be a difference between sight-space and touch-space might very well be that there *was* a difference. We should be confronted with insuperable difficulties *only* if we rashly supposed that our visual spatial selection, or again our tactual spatial selection, was *the whole* (circumscribed) spatial reality which confronted us in a given area.

A simple illustration may elucidate the point. Let there be a set of numbers from 1 to 100, and let us suppose that sight and touch have the sort of selectiveness that sometimes occurs in hypnotised persons. For simplicity's sake, let us assume that sight selects the odd numbers, and these only, and that touch selects the even numbers, and these only. In that case, if we rashly asserted that either sight or touch acquainted us with the whole series, we should be making a bad mistake. Sight, on the hypothesis, would acquaint us with 50 numbers, and touch also with 50; but there would really be 100. On the other hand, it surely would not follow from the hypothesis that the odd numbers were not numbers and did not belong to the series; or that the even numbers were not numbers and did not belong to the series; or that it would be impossible to arrive at an accurate knowledge of the series from sight and touch combined without either denying or radically transforming the evidence either of sight or of touch.

Let us then apply this illustration. If what we see and if what we touch are, neither of them, the *whole* reality with which we are confronted, is there any reason why the set of visual puncta that are seen at any given time *should* have precisely the same properties as the set of tactual puncta that are felt at that time; and if tactual puncta need not be simply identical with visual puncta, why should sight-space either *seem* or *be* the same as touch-space? Yet, so far as I can see, both might very well be authentic selections from *the same area*; and physics, which is concerned not with sight-space or with touch-space, but either with the whole space from which each of these selects, or with *another* (intellectual) selection of its

own which has proved convenient for scientific purposes, need renounce neither of them.

III. ERROR

It is sometimes said that naïf realism cannot consistently *admit* (much less "explain") errors or illusions in perception, whereas other theories are quite competent to deal with error. This objection, if true, would be final. But is it true?

In one sense *no* theory can "explain" error, for it is *sui generis*. To say, for example, that error is just a sort of misfit, like a shoe that pinches, is obviously to miss the point. An ill-fitting shoe does not make a mistake; there is error only if the salesman or the customer takes the shoe to be what it is not, *i.e.* a shoe that fits. Indeed, all apprehension runs the risk of being misapprehension, since, as the ancient sceptics saw, there is no *infallible* "nota," in the case of any apprehension, that what is apprehended *must* be what it seems to be. "Explanations" of error have therefore quite a different purpose and function. The possibility of mistake being granted, what such explanations do is to classify recurrent types of mistake, and, if possible, to reduce the mistakes to a few prevalent types, for which there may be "room" and "cause."

Many opponents of naïf realism maintain, however, that, *ex hypothesi*, the theory leaves no "room" for error at all. The theory of naïf realism is that there is "face to face" inspection of reality in sense-perception, and, according to the critics, there is "room" for error only if there are intermediaries which could be abused or if the "objects" of apprehension are semi-mental products, where the mind may play its constructive part well or ill.

The confidence with which these criticisms are made is surely a little curious. Why should either construction or mediation be more fallible than apprehension itself? And how can the exponents of either theory evade the admission that ultimately they, like anyone else, are forced back upon misapprehension and upon nothing else? What has to be explained is not faulty construction, but a faulty construction that masquerades as correct; not an inconsequent intermediary, but an intermediary which, being inconsequent, appears to be, and is accepted as being, perfectly efficient. Again, to ask naïf realists how they *know* that what they call "veridical" perception *is* veridical, is just to ask them whether they have an infallible "nota" of apprehension. Unless these critics are complete sceptics, they themselves maintain that there is "veridical" representation or "veridical" construction; and they also may be invited to say how they *know* that the representations or constructions that they accept as veridical really are such.

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More in detail these critics argue somewhat as follows:—

(1) They say that in some illusion of the senses (*e.g.* the invincible illusion of the bent oar in the water) what is perceived is obviously a *fact* of experience, whereas in “error” proper there is no such fact. In erroneous judgment, they say, there are no false facts, *e.g.* the false fact that Lord Kitchener survived the destruction of the *Hampshire*. But the appearance of the bent oar is a “fact”; and naïf realists cannot explain its unreality.

To this I reply that there is a mistaken appearance to be accounted for in both cases. In both cases, *something*, whether a percept or a proposition, appears to be what it is not. In both cases there is the fact of misapprehension; and if illusion be opposed to fact (as is assumed) it follows in both cases that the bent oar and Lord Kitchener’s survival are *not* facts, although it is a fact that the misperceiving or the misjudging occurs. In short, the “facts” in the case are only that the oar *looks* bent and that the false proposition about Lord Kitchener *looks* true. It is not a fact, in either instance, that there is a bent oar or a surviving Field Marshal.

(2) But, it may be said, an illusion of sense is a mere seeming, and therefore must be what it seems to be. This statement, I reply, would, if true, also apply to the false proposition. In any case, however, it does not follow that because something, say x , appears so-and-so, there consequently is an entity, the appearance or seeing of x , which is apprehended infallibly. When x is misapprehended, *nothing* is what the misapprehension declares—that is to say, *nothing* is what it is not. And the realistic contention is simply that, if x seems so-and-so, then it may *be* what it seems, and should be provisionally accepted as being what it seems, unless and until a better reason can be given for holding it not to be what it seems to be.

(3) A still feebler argument asserts that error, like truth, refers to judgments only, and consequently that erroneous perception is nonsense. If the term “error” is restricted to judgment, then, plainly, a perception cannot be erroneous. But equally it cannot be true, and therefore it cannot be infallible. All that naïf realists have to maintain, in that case, is that mis-sensing occurs, and that mis-sensing is misapprehension. Their withers, therefore, are unwrung *unless it is denied that perception is apprehending*. If perception were not apprehension, but a mere state of mind, or of quasi-mind, there would be some point in the objection; and this, I think, is what most of these objectors really do assume. Such an assumption, however, is just a denial *in limine* of the analysis of naïf realism; and naïf realists need not be greatly disturbed by the reflection that *if* their analysis is mistaken from top to bottom, *then* it is mistaken.

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IV. PUBLICITY

As we saw, naïf realists held that perceiving or apprehending did not alter or even affect the entities perceived or apprehended—indeed, that, if perceiving or apprehending did so, they would frustrate their own purposes and be eternally cheated by the very conditions of their existence. If therefore A's or B's perceptual processes do not modify what A and B perceive, there seems to be no good general reason for denying that A and B might literally perceive the same thing. Yet according to their critics it is notorious that A and B perceive private percepts in a private space.

One wonders, perhaps, who *told* these critics that all percepts are private. No doubt if percepts are assumed to be (a) mental states or (b) brain states or (c) products which imply the constructive operation of brain or mind, then, in some sense, they must all be private. Many of them might be precisely similar, but none of the percepts of different people could be literally identical. Apart from such assumptions, however (which are flatly opposed to the analysis of naïf realism), it is not at all clear why percepts *must* be private.

To prove the point, it might be maintained—

(1) That all percepts vary with the life history of the percipient, and that it is unlikely that any two life histories could be the same. To this, however, it seems a sufficient reply that the life histories might be the same *in relevant respects*. It surely does not follow that persons with different life histories apprehend something different when each apprehends the number 2; and, according to naïf realists, the "relevant respects" would be just an advance in clearness of apprehension.

(2) That personal associations accompany all perception. The smell of the pine woods must on this account be sensibly different to town bred and country bred, to Norwegians and South Sea Islanders. This argument, however, seems to be only a weaker echo of the former. It would be difficult to prove that we cannot, in general, discriminate between such personal associations and the odour itself.

(3) That each of us can tell from his own experience (accepting the reliability of memory) that if he looks at a table from above, from the side, etc., he apprehends *different*, although corresponding, shapes. Hence it follows that if A and B have the same sort of eyesight, each must perceive a different shape when each is looking (at the same time) at what both of them call "the same thing," since A and B, having different physical bodies, cannot be in the same place at the same time.

(4) That each of us can artificially induce astigmatism and other such anomalies in ourselves, and so are not entirely at a loss, even from our own experience, to understand how individual physical

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differences in the organs of vision probably lead to individual differences in visual percepts. (These physical differences, of course, are found in different persons, in the same person at different times, etc.; and regarding other senses parallel arguments might be adduced from, *e.g.*, the artificial blunting of the sensitivity of our finger-tips.)

(5) That even in his own case, anyone can observe that if he gazes, say, at a "steady" candlestick for thirty seconds, he doesn't in fact perceive precisely the same shape during the thirty seconds, but, instead, a fluctuating series of candle-like shapes.

The last three of these arguments may certainly be taken to prove that what is commonly called "the same thing" is not literally perceived as an identical percept, unless in exceptional cases, by the same man at different times, or by different men at the same time; and also that such differences are perfectly normal and usual. Indeed, the absence of such differences would be most unusual, except to the limited extent to which we may "correct" our percepts (in the way in which a person with emmetropic eyes normally perceives, through weakish spectacles, pretty much what he would perceive without the spectacles, *although* the spectacles alter the direction of the light-rays). It would, therefore, be quite hopeless for naïf realists, without further explanation, to say that all the elliptical "appearances" of a florin are mistakes, and that only the circular "appearance" (which is seen when the florin is directly in front of us) is "real." To say so, without explanation, would be a foolish assertion of unwarrantable privilege.

In the days before they died many naïf realists used to say, in effect, that the statement "the florin is round" was really "Pickwickian." The florin, they declared, "really" had, at any time, *all* the shapes which could be perceived from any angle (at any rate by a "normal" percipient). To call it "round" *simpliciter* should simply mean (*a*) that the series of its shapes tended towards circularity, and were for the most part approximately circular; (*b*) that for practical purposes, especially for touching the florin, the circular shape was the most important.

This doctrine was not, as some critics supposed, a virtual abandonment of naïf realism. Naïf realists were quite entitled to explain what they meant by "being in the same place at the same time." And if they meant that the florin was really a specific collection of shapes, then, for them, the sense in which any "thing" occupied a "place" at a time was just the way in which a collection of shapes occupied a collection of places at that time. They did not need to give the usual *physical* meaning to "occupying a place," and could easily distinguish between, say, a circular florin and an elliptical silver badge, although some of the shapes of the florin might have

the same figure as some of the shapes of the badge. For, as they saw, the two *series* were distinctive, and could be readily ascertained to be so.

It might reasonably be objected, however, that this account of the matter introduced a certain respectivity to the observer. Instead of defining the shape (or shapes) of the florin, it defined its shape (or shapes) with respect to the position of the percipient; and that did not look like defining what the florin was in itself, irrespective of the apprehension of it.

A partial reply to this objection was that the *mentality* of the observer need not enter into the question. The same sort of thing would occur if the "observer" were a kodak. Nevertheless, *respectivity* would be implied even if *mentality* were not; and the analogy of the kodak could not help naïf realists, since the shapes on a photographic plate are not at the same place as the shapes which, as we say, are "taken" by the kodak. It would seem, therefore, that naïf realists have to bestir themselves to give a more plausible explanation of this matter.

I have said that (keeping to the sense of sight) the realistic doctrine that we inspect the surfaces of things when we see them does not imply that we can see *all* the puncta, visual and non-visual, that may be contained in these surfaces. I now assert, further, that if we look at the florin (*a*) in front, (*b*) sideways, it does not follow that precisely the same visual puncta can be observed. The effect of looking at the coin sideways may very well be that some of the puncta, visible from the front, are *not* visible from the side; and also that the difference in question need not be a uniform loss of visibility over the whole surface of the florin, but a considerable loss in some parts, and no appreciable loss in others. In that case, if we hold firmly to the doctrine that a realistic visual selection is rigidly confined to what is actually seen, it would be consistent and (I suggest) even plausible to maintain that different shapes would be visible from different positions, because different sets of visual puncta would be observed, although *all* the puncta observed from any position would properly and literally *be* punctual portions of the actual surface of the actual florin. On this hypothesis, when we looked at the florin from in front we should see the *maximum* number of visual puncta, and therefore might say, in an intelligible sense, that the florin *was* visually round. From the side we should only see a smaller set of *these same puncta*, and that smaller set would not be round. In all such cases we should get all that our eyes could give us, and there would be no reason for denying that what we got was literally "real."

I am therefore rather sorry that the naïf realists have died. Had they lived they might have argued to some purpose.

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PHILOSOPHY IN ITALY

ON the occasion of the Hegelian centenary Croce published an article in the *Revue de Métaphysique et de Morale*,¹ in which he disputes some tendencies recently manifested by survivors of the old Hegelian school. Instead of bringing fresh minds to reconsider the philosophical problems propounded by Hegel, they try to make the philosopher of Stuttgart into the object of passive contemplation, practically a cult. In his article Croce takes as his starting-point a vicious circle in which Hegelism has struggled and continues to struggle. It consists in affirming that it is only possible to criticize a system by means of a superior principle which must surpass the principle of the system to be criticized, reducing it to one of its subordinate moments; and that a principle superior to Hegel's, that is, to the Idea which dominates and crowns his system, has not yet made its appearance in the world. When the problem is put in this form one can presume that a superior principle never will see the light, and that from this presupposition in its methodology Hegelian philosophy will draw an incentive to laziness and inertia. While "whoever sets himself to study Hegel in a critical spirit not only makes him descend from the altar where the old Hegelism had placed him, and brings him back to the course of history in which he originated, where he moved, and still does move; but furthermore he will not let himself be halted by the preliminary question indicated; he is well aware that the 'superior principle,' the 'new age of philosophy,' the new 'eon' is he himself in so far as he researches, thinks, criticizes, and reconstructs; that it is a work he must complete on his own intellectual and moral responsibility, engaging himself in it to the full."

As an example of this attitude Croce sets about examining the Hegelian problem of the identity of philosophy and the history of philosophy. He rejects Hegel's solution which consists in making the ideal series of categories, deduced dialectically by logic, coincide with temporal history, in the course of which the categories would succeed one another as a natural development. But this view (which would reduce the thinkers of history to dummies, to bearers of categories) is not criticized by Croce with the relinquishment of the exigency that it represents, that is, to blend the eternal values of thought with the course of becoming; rather, the identification is pressed still further, including the history of philosophy in the more general human history, where it acquires relief and individualization. Similarly the Hegelian concept, that the rational is real, is reintegrated by Croce without those attenuations with which Hegel surrounded it (that is to say, distinguishing what is truly real, and is only identified with the rational, from what is merely accidental). Croce, however, accepts it in its entirety, but he adds as an antidote the declaration that "it is to be referred to the domain of thought and not to the domain of will and moral action; to the world in so far as it is a question of understanding it, and not to the world in so far as it is a question of changing, inaugurating, and creating it." This concept withdraws itself from the accusation made so many times, and not unjustly, of justifying practically and morally evil, injustice, and the *status quo*.

¹ B. CROCE, "Un cercle vicieux dans la critique de la philosophie hégélienne" (*Revue de Métaphysique et de Morale*, 1931, pp. 277 et seq.).

PHILOSOPHY

An article by Caramella¹ deals with the old and ever recurring discussion on the relations between religion and philosophy, introducing a third element which converts the traditional dyad into a triad: religion, theosophy, and philosophy. This theosophy, however, does not represent the intrusion of something new, but serves to point out the need for clearness and rational explanation inherent in religious experience, and therefore provides a link between the immediate faith of religion and the full consciousness of philosophy. This slight topographical indication helps to fix the orientation of Caramella's research. Against the various tendencies of contemporaneous criticism, which, while at variance with one another, yet agree in making religion an autonomous spiritual form, sufficient unto itself, Caramella opposes a view of religiosity as a theoretical activity which, at least tendentially, coincides with that of philosophical reflection (as it cannot be given two different logics). I say 'tendentially' because it is far from the author's mind to put religion and philosophy on the same plane. There is undoubtedly in religion something immediate and practical, a faith, a surrender, a dependence on something greater than ourselves. There is in it, too, "the immediate rising and the immediate reflection of speculative thought on the tragedy of life," that is, a theoretical element, or rather a theoretical torment which urges the religiosity of the individual or of humanity to purify itself, to exalt itself, to free itself from the bonds and the subjection of the primitive. It is the effort required to satisfy this exigency that Caramella understands by theosophy. It is a more comprehensive term than the more commonly used one of theology, because it includes not only the dogmatic and doctrinal arrangement of the principles of faith, but also the preceding phases of religious construction, such as the myth and the symbol. In this acceptation theosophy is distinct from philosophy, though they share the same nature and aspiration, because theosophy is always bound to an alogical and prelogical datum, that is, a story, a fable which it never succeeds in resolving into an organized body of concepts, although it strives unceasingly to rationalize it.

If the general trend of Caramella's thesis links up with the philosophy of Croce, in the sense that it denies a specific religious *a priori* assumption, yet his conception of theosophy is more allied to that of Vico which he renews, or rather gives a new sense to, namely, the "fantastic universal" spoken of by Vico in the *Scienza Nuova*. He makes use of it, too, with considerable acumen, in revising and retouching some reconstructions of philosophical and religious historiography. Thus, for example, he accentuates the mythical or more generally theosophical character of Greek speculation, especially at the beginning and at the end of its course; and, on the other hand, in the history of Christian theology he sees a philosophy in course of becoming, yet distinct from pure unadulterated philosophy, because it is indissolubly bound up with the story of the Bible.

In a book² which at least demonstrates plenty of courage Geymonat proposes to restore positivism in Italy, the genuine and pure positivism which in his eyes appears much more perfect in its Comtian origin than in the succeeding empiristic and evolutionistic interpretations, and therefore necessitates for him a reversion to the sources. Since in the last decades idealism had claimed to raze to the ground all positivist constructions, Geymonat's work naturally assumes the character of a *destructio destructionum*, a basic attack against idealism to pulverize its critiques and to show how the still living nucleus of positivistic philosophy emerges intact and undamaged. It must be pointed

¹ S. CARAMELLA, *Religione, teosofia, e filosofia*. Principato, Messina, 1931.

² L. GEYMONAT, *Il problema della conoscenza nel positivismo*. Torino, Bocca, 1931.

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out, however, that Geymonat, like many young men of to-day who call themselves forerunners, is somewhat behind the times. Many of us who once loved to call ourselves idealists and anti-positivists are now wholly indifferent to such denominations. We no longer believe in these philosophical genera. We would rather exorcise them as literary genera have been exorcised. What counts in reality is intellectual personality with its own creative genius, under whatsoever standard it appears.

Let us pass over this prejudicial question, however, and proceed to a review of the contents of the book. The first part presents a summary exposition of the doctrine of knowledge held by Comte, Stuart Mill, Spencer, Taine, Mach, Ardigò, and other minor philosophers. This exposition does not perhaps succeed in individualizing completely the distinctive point of view of positivistic epistemology. In the words of the author, "as a central idea of this epistemology there is demonstrated to us (and this is the principal result of the work) the impossibility of reducing the object to the subject in the complex fulfilment of their relations. Thus it is understood that transcendence of the world respecting man is not transcendence of something not intelligible, but the impossibility of reducing the intelligible to the intelligent; by analogy, immanence is not immanence of the known in the knowing, but immanence of every object of a new cognitive act in the totality of objects already relative to the subject and therefore in some way already known" (p. 230). This characterization seems to fail through deficiency and through excess at one and the same time: through deficiency, because in making positivism coincide with finalism all the phenomenistic and monistic currents are cut off, which form such a great part of that philosophy; through excess, because the generic dualistic designation is common as much to positivism (as the author intends) as to other systems, spiritualism for example.

A second part of the book is devoted to anti-idealistic polemics. This could have been the most interesting part, but it is actually the weakest, because the author has contented himself with complacently noting any slight aporia or contradiction in this or that system, not realizing that in so doing he only skims over the surface, and never endangers the nucleus within. Geymonat ends with an attempt at positivistic reconstruction in which one or two generic mental exigencies are of value; for instance, that philosophical synthesis should keep close to experience; that a proper *raison d'être* should be preserved in the objective world against the claims of idealistic subjectivism (Berkleyan or Fichtian), and principally that intellection should be considered as "an act which does not create a first cognitive relation, but deepens and determines relations already confusedly existent." This last idea, which corrects a too schematic view of mental activity as a synthesis of immediate sensations, was worthy of fuller development. Nevertheless, on the whole in the author's rough sketch I cannot succeed in finding anything specifically positivistic to justify his claims to reform.

M. Treves¹ devotes an interesting monograph to the study of the influences of the doctrine of Saint-Simon during the period of the Risorgimento. He shows how in Italy in the first half of the nineteenth century the ideologies of the eighteenth century still dominated on the one hand, recognizing in the individualistic and democratic tendencies the aptest means to obtain the redemption of the country. On the other hand, the need to return to medieval sources and national traditions, against the anti-historical tendencies of revolutionary France, became more and more great—a need that found its

¹ R. TREVES, *La dottrina Sansimoniana nel pensiero italiano del Risorgimento*. Torino, presso l'Istituto giuridico dell' Università, 1931.

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most fitting expression in the Romantic school. These conditions explain how the doctrine of Saint-Simon—"a doctrine diametrically opposed to all the ideologies of the eighteenth century, and in certain respects very near to the general tendencies of European Romanticism"—should have been resisted by the surviving partisans of the French ideologies of the eighteenth century, yet should find some exponents of the new national thought, such as Mazzini, Gioberti, and others, well disposed to accept it, though with limitations and reservations. Its influences are summed up principally, according to Treves, in its having contributed to the revival of the feeling of historicity, which was already being revived by the intensification of studies on Vico and the German Romantics; to the diffusion of the conviction of the necessity for putting a limit to individualism by means of a more organic conception of social life, to the reaffirmation that in faith alone can one find that security which is vainly sought for in sense and reason. "Nor did the doctrine of Saint-Simon contribute solely to strengthening these tendencies which were already dominating the spirits of the epoch; but it had particularly the merit of showing to the Italians how the ideas of historicity, religiosity, and anti-individualism ought to serve in solving the two greatest problems which were agitating Europe at that time: the social and the national problem. Respecting the first, it revealed the high importance of the economic factor in the historical development of humanity, and against the tendencies to adhere to legal precedent in the eighteenth century, it showed the need to reform, to socialize the law of property and the law of succession. Respecting the national problem, the doctrine affirmed that the reason and the foundation of law and of politics should be placed in the social idea of nation, not in the rationalistic idea of state; and, furthermore, it spread the conviction that through invincible historical necessity every nation should join in constituting itself into one state, and every state, so constituted, should unite with the others in a universal pacific association" (pp. 78-79).

GUIDO DE RUGGIERO.

(Translated from the Italian by CONSTANCE ALLEN.)

PHILOSOPHY IN RUSSIA

It is as difficult as ever to carry on any real philosophical work in Soviet Russia. A few details about the downfall of Deborin, once the leading 'red' philosopher, throw a characteristic light on the state of things there. The only philosophical periodical that exists in Russia, *Under the Banner of Marxism*, is published monthly in Moscow in connection with the official newspaper, *Pravda*. It is managed by an editorial board, which, until quite recently, was presided over by Deborin. It kept the Russian readers to some extent in touch with certain branches of thought in Western Europe, and occasionally contained articles of real philosophic interest. But about a year ago it was bitterly assailed by the First Philosophical and Scientific Conference of the Ivanovsky Industrial District, which found that the journal had deviated from the general line of Stalin's policy "on the philosophical and scientific front." The Central Committee of the All-Soviet Communist Party also drew attention to the dangerous policy of the unfortunate journal, and passed a resolution which said, among other things, that "in separating philosophy from politics and failing to insist throughout on the Party

implications of natural science, the editors revived one of the main tenets of the Second International, the divorce, namely, between theory and practice, adopting on a number of important points the attitude of Menshevik idealism."

The editorial board was reorganized, Debordin lost the chairmanship, and was subject to such violent criticism for his treachery to Marxism that he had a mental breakdown. One of the chief accusations against him is that in some work of his he defined matter as a 'complex of relations'!

The task which the Communist Party sets to philosophical thought in Russia at the present moment is to defend 'dialectical' materialism against idealism or any approach to it on the one hand, and against 'mechanistic' materialism on the other. Consequently, many writers hitherto perfectly respectable from the Marxist point of view, such as Plehanov and the psychologists Behterev and Cornilov, are now declared to be all wrong and out of date.

Outside Russia, the book that has been attracting a great deal of attention, both friendly and hostile, is Berdyaev's *Naznatchenie Tcheloveka (The Vocation of Man), an Essay in Paradoxical Ethics*, published by the Y.M.C.A. Press in Paris (318 pages). There is so much freshness and originality in Berdyaev's outlook that what he says does not fit in with the opinions of any one party: the ultra-orthodox are shocked by the lack of humility in his attitude towards the Church and his condemnation of capitalism, and the 'free-thinkers' cannot forgive him for being a Christian.

According to Berdyaev, the fundamental problem of ethics is that of the criterion of good and evil, and of the origin of the distinction between them. The good cannot be the criterion, for it already presupposes the distinction in question. The highest value lies beyond good and evil, but ethics is always on *this* side of the distinction, and its categories of 'moral' and 'immoral,' 'high' and 'low,' etc., are merely the symbolical expressions of an ultimate reality which transcends all limited definitions. It is in virtue of man's freedom that he can rise to this realm of true being, but freedom is the power to do both good and evil, and herein lies the tragedy of the moral life. Ethics must inquire into the fateful implications of freedom, and ask what is the relation between God and man.

In trying to answer this question, Berdyaev goes off into the very depths of metaphysics. Following Böhme, he distinguishes between Godhead or the Divine Nothing (Böhme's *Ungrund*) and God the One in Three, the Creator of the world. God creates man, but not wholly: man's freedom is uncreated—it is rooted in the *Ungrund*. "Man is the child of God and the child of freedom, of nothing, of non-being, of *το μη ον*." Thus God is not responsible for freedom which is the source of evil—He has no power over non-being. He can only appeal to it through love in His aspect of Redeemer and Saviour; and man can choose to co-operate with God in creating new values, or to oppose God and strive to sink back into the abyss of nothingness out of which he was created. His irrational 'meonic' freedom may lead him either way.

In order to account for the origin of the distinction between good and evil, Berdyaev has recourse to the Christian myth of the Fall. He interprets it, however, not as an unfortunate moral lapse on the part of Adam, but as an essential moment in the growth of consciousness. 'Paradise' meant a state of unconscious harmony with the cosmos; man fell away from it for the sake of gaining a fuller and deeper life. He preferred the bitterness of knowledge to the blissful life of ignorance. Consciousness means pain and sorrow, but through it man will reach the perfect fullness of life, transcending the division between good and evil, but enriched by the knowledge of it.

The conflict between the 'solar,' individual element in man and the generic

cosmic forces that draw him back to the primordial chaos makes itself felt in the struggle of the conscious and the subconscious in the human personality, in the sex life, in the opposition between the individual and the social group to which he belongs. It can only be solved by realizing the divine aspect of our nature and so sublimating all its lower forces, that instead of dragging us down they shall be the means of expressing the highest, until 'God is all in all.' Such *theosis* is the goal of spiritual endeavour, and until it is reached moral life is bound to be one of perpetual conflict, not only between good and evil, but between different kinds of good. We are constantly called upon to choose between courses of action each of which is good; no set rule can help us to make the choice, for each particular situation is unique, and must be dealt with on its own merits; it calls for a free creative act of valuation on our part. With great force and eloquence Berdyaev describes the insufficiency of the 'ethics of law,' opposing it first to the 'ethics of grace,' and finally to the 'ethics of creativeness.' At its highest level moral consciousness cannot rest content with the idea of retribution and with a final division into sheep and goats: it demands complete redemption of the world and the regeneration of every individual being.

The range of subjects touched upon by Berdyaev is so great that his treatment of some of them is inevitably somewhat dogmatic. His conception of knowledge, of freedom, of human nature, of the 'creative' function of man, abound in contradictions; his theories about God and man require much philosophical elaboration; he is obviously fond of the paradoxical, arbitrary, 'take it or leave it' method. But in spite of all this *The Vocation of Man* is a very fine book, full of illuminating suggestions, brilliant generalizations, true and profound observations on the psychology of moral life. Berdyaev brings out better perhaps than any other modern writer that the Christian ideal is not a dutiful observance of divinely prescribed rules of conduct, but a free and spontaneous expression of that deeper self which is the image and likeness of God.

Vysheslavtsev's excellent little book, *Etika preobrazhennago Erosa* (*The Ethics of the Transfigured Eros*), *Problems of Law and Grace* (270 pages), just published in Paris, deals with very much the same subject as Berdyaev's, but it is shorter, more limited in scope, and more closely reasoned. Also, in contradistinction to the *Vocation of Man*, it is not based on any religious presuppositions, and is addressed 'both to believers and unbelievers in so far as they are capable of philosophizing.' Briefly stated, Vysheslavtsev's contention is that morality based upon prohibitions and imperatives cannot lead to 'the good life'; 'thou shalt' and 'thou shalt not' of the moral law may influence a man's actions but can never change his heart. It is only through the love of the moral ideal, conceived not as an abstract notion but as a living Being embodying the fullness of perfection, that human nature can be sublimated, and its creative activities released in the service of the Highest. The existence of the 'Highest,' without which sublimation is impossible, and the goal of the moral life cannot be attained, is defended on the ground of the ontological argument, re-stated in an extremely interesting way.

In the early part of the book Vysheslavtsev shows by means of a number of quotations from the New Testament that in Christianity the problem of the insufficiency of the moral law 'to save' man is fully faced, and that the recent discoveries of psychoanalysis, *la loi de l'effort converti*, etc., express the same truth that has been formulated by St. Paul. The central difficulty of the moral life is that a moral imperative not merely does not inspire man with the power to carry out its behests, but actually rouses the subconscious forces of opposition to it. The opposition is twofold—it proceeds both from

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the irrational realm of instincts, blind strivings and desires, and from the conscious will of man which rebels against any command as such. The first kind of opposition can be dealt with by means of 'imagination,' which captivates our subconsciousness and turns it into new channels. While any conscious determination 'to be good' is doomed to failure, deep spiritual changes may be worked in the soul through the love of a beautiful personality, imperceptibly shaping the dark realm of the subconscious into the image and likeness of the beloved. A blind striving for a greater fullness of life lies at the root of all life and activity, and moral regeneration of man consists in raising this 'Eros' from the lower to the higher range of values, until the whole of our nature is transfigured and sanctified and we are 'born in Beauty.' Such sublimation, however, is only possible with the consent of the conscious self which recognizes the value of the moral ideal and wants to overcome the resistance of 'the flesh.' But the self may refuse to serve any ideal because the very thought of service is repellent to proud self-will. The type of mind which rejects all authority just because it *is* authority has been immortalized by Dostoevsky. Any form of law or command is powerless in this case; the proud will can only be won over by love. The good must be *freely* chosen by the individual, and the responsibility for the choice rests in the last resort with him alone. God's loving call is addressed to this ultimate, irrational freedom of man, and it is for man to accept or reject the divine grace.

In a series of very interesting chapters Vysheslavtsev analyses the conception of positive and negative freedom and the relation of freedom to values, with special reference to the doctrines of M. Scheler and N. Hartmann. Having established that free choice is the essential condition of sublimation, he goes on to argue that the possibility of sublimation presupposes the existence of the 'Sublime,' and shows that Freud's theory breaks down just because he denies the reality of the higher realm of being. The ethics of sublimation must be a religious ethics, based upon the fact of our dependence upon the Absolute perfection or God. The last part of the book is devoted to showing the logical necessity of such a dependence.

Polkovnikov's *Dialektika Istorii* (*The Dialectics of History*) (170 pages) is a typical instance of the Russian gift for brilliant generalization which often does violence to facts, but always makes interesting and stimulating reading. The author is a representative of the so-called Eurasianism—a new and influential movement in Russian thought. He maintains that the historical development of humanity passes through the three stages of the dialectical process. The first stage is that of the great civilizations of the East inspired by a subconscious intuition of the one Absolute, expressed in sensuous symbols. This intuition 'governs all aspects of life just as instinct determines the life of bees in a hive.' The entire life of the individual is dominated by the great whole which is regarded as the visible expression of a religious truth. All belongs to God and is devoted to Him through His representative on earth; the individual is rightless and there is no personal freedom. But human personality has absolute value and needs freedom as a condition of knowledge and of creative activity. "Freedom demands that man should reject God and rebel against Him in order to know Him." Thus we arrive at the second stage of the dialectical process expressed in the history of the West: the falling away from the One, the striving towards the sensuous manifold, the opposition to God. The mind of man concentrates on a number of finite isolated objects; in philosophy it defends a mechanistic conception of the world and various forms of rationalism, becoming hopelessly entangled in the contradictions between the individual and the general, part and whole, the sensuous and the non-sensuous. Social and political life

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is determined by the principle of equality and by the ideal of the democratic state.

The way out of the contradictions of a rationalistic civilization is to be found at the third stage, when 'mystical reason' will arrive at a synthesis of the One and the many in the œcumenical Christianity of the future. The conception of such a synthesis, worked out by German idealism, has been further developed by the religious thought of Russia, with its mystical idea of pan-unity. It is the mission of Russia to combine intuition and reason, the Eastern and the Western elements.

At the end of 1931 a new Russian magazine, *Novy Grad*, was founded in Paris for the consideration of social and economic problems from the point of view of a Christian philosophy. It is opposed to Communism, but does not defend capitalism, and seeks some new way of solving the economic difficulties of the modern world.

A new number of the *Russische Gedanke* is due to appear in the spring; meanwhile its indefatigable editor, Mr. Yakovenko, has been busy bringing out an almanack in honour of Professor Lossky's sixtieth birthday, *Festschrift N. O. Lossky zum 60 Geburtstag*. It contains articles by well-known philosophers of different countries, and seems to have aroused a great deal of interest in Germany and Czechoslovakia.

NATALIE DUDDINGTON.

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The Platonic Tradition in Anglo-Saxon Philosophy. By J. H. MUIRHEAD, LL.D., Professor Emeritus of Philosophy in the University of Birmingham. (London: Allen & Unwin. 1931. Pp. 446. Price 16s.)

One of the most scandalous gaps in our philosophical literature is the absence of a history of British idealism. Even those of us who hesitate to call ourselves idealists in the technical sense must acknowledge that the idealistic revival in Britain in the latter half of the nineteenth century formed one of the grandest peaks our culture has ever risen to, and that it has for ever cleared us of the foreign reproach that we as a nation are incapable of the sublimer efforts of speculative thought; and we are aware, too, that there had been stirrings of a somewhat kindred type of philosophizing in earlier days, a type which we distinguish rather crudely as rationalistic and objectivistic from that other form, represented conspicuously by Hume and Mill, which stands for a narrow empiricism and consequently ends in subjectivism. It is, of course, the former and more comprehensive type that wants an historian.

At last Professor Muirhead has taken up the neglected task, and everybody will be glad that it has been left to him. Indeed, if I may express my admiration perversely, it is his fault that the gap has existed so long, for he has more qualifications for the filling of it than anyone else, having spent close on sixty years in the movement he is writing about.

The book is not strictly a history. It carries selection too far to be that. But it is an inestimably valuable contribution, as authoritative as philosophical history can be, towards one. It is a sequence of historical studies, some with the secondary purpose of exhuming and revivifying almost forgotten thinkers, all of them with the primary purpose of supporting a thesis. It is not easy to state this thesis unambiguously. Sometimes Professor Muirhead seems to mean that our nineteenth-century Neo-Kantianism (or Neo-Hegelianism, for it was Kantianism in the constructive *spirit* of Hegel) was really a thoroughly English development, arising from and continuous with an earlier English idealism which in turn came ultimately from Plato, and that it owed to German thought little more than a reawakening prod. At other times he seems content to maintain that British Neo-Kantianism, far from being a mere echo of German thought, acquired and retained a distinctively national character. This second contention is too commonplace to account for the writing of the book. The first, I believe, is the real one. At the very first sight it appears to be an overstatement, and after reading the book, though I feel considerably chastened, I still find it so, and I suspect that Professor Muirhead would admit the exaggeration, would indeed say that it is conscious and intended, being needed as a corrective of the common supposition that rationalistic idealism is among us a thoroughly exotic importation and that the English genius in accepting it side-tracked and lost itself. The correction was needed and is admirably administered.

But the question how much English thought is English and how little of it is German is, as Professor Muirhead at one point confesses, a petty one. The only question worth asking about a type of philosophy is whether it is true or on the way to truth, whether, that is, it attacks the right sort of problems and the full range of them and offers solutions of a correspondingly

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fundamental and comprehensive kind; and such a question can only be answered through an historical survey. As one would expect, the author quickly becomes absorbed in this major question, leaving the trivial one about German versus English factors to slip into the background (as he ought for the further reason that he regards both alike as Greek).

In his preface Professor Muirhead notes that the Platonic tradition was planted here as long ago as the ninth century, by Eriugena, but he begins the story with the Cambridge Platonists. Since he calls Aristotle "the greatest of the Platonists" it is not clear why he passes over the medievals with nothing but a disparaging remark; what is clear is that the term "Platonic" is made to mean either too little or too much. After a preliminary sketch of the general characteristics of the Cambridge school he passes to a detailed description of the thought of its most systematic member, Ralph Cudworth, and then proceeds to expound the little-known systems of the two Oxford men John Norris and Arthur Collier, both of whom reflect the influence of Malebranche. These chapters, filled with quotations both relevant to the matter in hand and delightful in themselves (a choice anthology of philosophical thoughts neatly and beautifully said could be compiled from these thinkers alone), have the great value of tilling afresh what has now become fallow ground. Many of us will thankfully take the account of Cudworth as a substitute for plodding through the three ponderous volumes of the *Intellectual System*, and the accounts of Norris and Collier are timely in view of the present revival of interest in Berkeley. Throughout the rest of the eighteenth century, during the period that we oddly call the Age of Reason, rationalistic idealism was asleep—asleep, it is pointed out, because the theological, moral, and political conservatism of its earlier representatives was out of tune with that age. Professor Muirhead consequently moves straight to the nineteenth century, to deal with the great movement that had Green as its leader. He treats at some length of its origin, attributing this to Coleridge and claiming that the latter owed his knowledge and love of idealistic speculation far more to the reading of the seventeenth-century idealists than to the current systems of Germany. From the point of view of his thesis this is the crucial part of the book—Green and other leaders derived from Coleridge and Coleridge from the Cambridge and other early Platonizers, so that the movement under Green was not a German intrusion but a native development. Unfortunately, the evidence for this nexus is not given; having grown too large, it has been committed to a separate book, *Coleridge as Philosopher* (1930), to which we are referred. An epitome of the evidence there given would have been useful, especially of that for the extent of Coleridge's influence over Green and the rest. Carlyle is then introduced as an auxiliary spirit, but is discussed beyond need, as though he could here be regarded as interesting in himself. The following chapter, however, on "How Hegel Came to England" is altogether delightful, as much a story as the title promises, and it is good to find in it justice done to Ferrier, whose lucid works are scarcely ever read nowadays. From the account of the full tide of the movement Green, Caird, and Bosanquet, to all of whom the book is dedicated, are missing except as names, on the ground that the author has written on them elsewhere. Instead we are given an illuminating summary of the famous *Essays in Philosophical Criticism*, and then, with just a slight lack of sympathy, a critical analysis of the revolt against them by Andrew Seth (Pringle-Pattison), one of their own editors, who had begun to fear that the Hegelian Absolute was a menace to the conception of personality in both God and man, levelling all individuality in a merely logical Whole, and depriving the notion of immortality of any desirable meaning. The further revolt of Bradley is then singled out for a very thorough

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treatment, running into almost a hundred pages. This detailed study, critical but appreciative, is probably the most notable part of the book and will be received eagerly by everyone, for we have long been waiting for a systematic exposition of Bradley's thought in its entire compass. By a happy coincidence another account of Bradley has just been given to us in *Scepticism and Construction* (Allen & Unwin) by Mr. C. A. Campbell, who passes beyond historical appreciation to a constructive elaboration of Bradley's "sceptical" principle. With these two complementary expositions before us we should again become sensitive of the Oxford thinker's deep probings.

After Bradley, Professor Muirhead leaves England and crosses to America to recount the parallel story of idealism there, writing very briefly of the movement from Jonathan Edwards to Harris and Peirce, and thereafter discussing in seventy interesting pages the philosophy of Royce in its successive phases. The book closes with a chapter on "What is Dead and What is Alive in Idealism."

Very rarely is a slip of memory to be found. The only one worth noting is the statement that "Spinozism was the logical completion of Malebranche's development of Cartesianism" (p. 107). Spinoza's *Ethics* was substantially written some years before the *Recherche de la Vérité* appeared. I do wish that a summary of what the author has written elsewhere on Coleridge, Green, Caird, and Bosanquet could have been included to place the rest of the book in evident perspective, and that the last chapter could have been expanded, but doubtless Professor Muirhead modestly thought that the book was already big enough. I wish, too, that he could have found a little niche for Berkeley, whose contention, constant through all the stages of his thought—the impossibility of separating mind and object—is in complete harmony with the tradition whose evolution is here being traced and has, indeed, become one of its principal foundations. Complaint, however, is out of place; the work is so rich in both the body and aroma of mellow scholarship that one can only be grateful to the doyen of British idealism for his latest gift.

T. E. JESSOP.

The Natural and the Supernatural. By JOHN OMAN. (Cambridge: at the University Press. 1931. Pp. xiii + 506. Price 18s. net.)

Without any exaggeration, this is a great book, of wide learning, acute reasoning, fine moral and religious discernment, of striking originality, expressing the characteristics of the author, a virile and independent personality, asserting individual liberty and responsibility, recognizing only the authority which appeals to reason and conscience. The title might mislead, as the volume is not concerned at all with the contrast of miracles and the order of nature, but with both terms in the widest sense; the contrast is that of world and God, the actual and the ideal, the temporal and the eternal, and with man as belonging to both, and as challenged, not to flee from the world to God, but to victory in the world in the power of God. The guiding principle of the discussion is man's response to his environment, in which the natural and the supernatural are inseparably blended, in which his response to the one is incomplete without the other. The First Part deals with the *Scope and the Method* of the inquiry; the Second with man's intellectual and æsthetic response to his environment in *Knowing and Knowledge*; the Third with his moral response to *necessity* by his *freedom*; and the Fourth with his religious response in the relation of the *Evanescence to the Eternal*. Epistemology, Æsthetics, and Ethics have justice done to them, as well as the Study

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of Religion. It would be impossible within the necessary limits of a review to follow in detail the close-knit argument. Only a few samples of the distinctive quality of the book can be offered. While not altogether satisfied with "Windelband's account of the manifestations of religion," the writer provisionally accepts it, summarizing it thus: "Religion is (1) an attitude of the Spirit—a reverence and a trust; (2) a cult—an adoration and worship; (3) a social bond—an organizing force; (4) a concern with the Supernatural—in some sense a theology" (p. 15). He takes (2) and (3) together. After discussing the descriptions of religion as a mental state by Kant, Schleiermacher, and Hegel ("Kant placed religion in the sphere of will, Schleiermacher of feeling, and Hegel of reason," p. 17), he concludes that "in all the theories alike, it is the objective reference which is characteristic, and that cannot be determined psychologically" (p. 21). Passing over what he says of religion as a social bond, his conclusion regarding this objective reference of religion as theology may be given: "For Kant this reality is the moral order, for Schleiermacher the artistic harmony of the Universe, for Hegel the cosmic process of reason; but for all it is that which is absolute in its claim, and for all, religion is the recognition of this claim and through it, is emancipation from the fluctuating values of sense, and victory over all that is changing and accidental" (p. 28).

A searching criticism follows of the theories which treat Religion as an Illusion. As has already been indicated, the writer himself lays stress on the objective reference, and not the mental state. "We know all environment," he says, "not as impact or physical influx, but as meaning; and this meaning depends on (1) the unique character of the feeling it creates; (2) the unique value it has for us; (3) the immediate conviction of the special kind of objective reality which is inseparable from this valuation; and (4) the necessity of thinking it in relation to the rest of experience and the rest of experience in relation to it" (p. 58). In applying this analysis to religion, he adopts the following terminology. "The 'holy' I propose to use for the direct sense or feeling of the Supernatural, and the 'sacred' for its valuation as of absolute worth. The special object I shall call 'the Supernatural,' and the thinking together 'theology,' both words, however, having a somewhat more specialized meaning than they have in popular usage" (p. 59).

Passing to Part II, we first notice his account of the "Four Types of Knowing": "These we may call awareness, apprehension, comprehension, explanation. Like everything unique and only known by experience of itself, they are impossible to define; and like all that belongs to one mind, they ought not to be divided" (p. 120). The terms explain themselves: apprehension corresponds with the percept in its fulness of meaning, and comprehension with the concept. Not only does the writer lay stress on the importance of the first two, but one feels that for his own mentality they are characteristic. This is confirmed by his admirable discussion of "a Poet's Awareness and Apprehension, the Child's Perceiving, and a Poet's Child." In awareness and apprehension he insists on the need of sincerity, sensitiveness, and unity. This unity in awareness corresponds to what in religion he describes as "the undifferentiated holy" (p. 142). Corresponding to the objective, there is the subjective unity—the individual and his individuality, and one relation between them must be preserved. Interesting as is the discussion of perception and sensation, we must pass it over, noting only what he says of "the function of interest." Of importance is the chapter on "Value and Validity." He accepts the distinction, now familiar, between theoretical and value judgments, distinguishes Natural and Ideal Values, discusses Logic, Ethics, and Aesthetics, as concerned with these Ideal Values. Their validity lies here: "the test of our higher values is that they are sacred. This means that they

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belong to an environment which awakes absolute reverence and imposes absolute obligation" (p. 212), for they are an "unfolding of the Supernatural in the Natural" (p. 214).

Part III, dealing with the relation of Freedom to Necessity, displays what has been a dominating interest of the writer in all his writings. Starting with a discussion of the Cosmological Laws of Award and Inertia, he rejects both as inadequate theories in morals and in science. Having discussed also attempted concordats between necessity and freedom, such as Kant's distinction between phenomenon and noumenon, he finds no solution of the problem in any of them. Evolution next invites attention as a Process of both the Natural and the Supernatural. Of this process "the vital significance is the relation of the individual to environment, as freedom in respect of the Supernatural as much as of the Natural" (p. 297). "Freedom, to be truly free," he says, "must have two victories. First, it must win freedom in respect to the Natural, both in ourselves and in our world; and second, it must win freedom in respect to the Supernatural itself. With the liberty of the children of God so conceived, no one of us is free. At best we are only being made free. Yet only as we are thus free are we the kind of persons, in the kind of environment who, in practical experience, can because we ought" (p. 302). A discussion of Conscience and Conscientiousness logically follows on such a conception of freedom. While the individual conscience is fallible, conscientiousness may be absolute in its constant endeavour to apprehend the supernatural environment of truth, beauty, or goodness, which our ideals affirm as ever active in us and with us. Our freedom is realizing the ideal in the real, and there is no divorce of the natural and the supernatural. "We do not with any profit form mere ideas of God. We win a true idea of God only as by it we have victory over the world" (p. 343).

Thus the discussion leads on to the distinctively religious problem, or the relation of the Evanescent and the Eternal. With this Part IV deals. This part, after a preliminary discussion on History and Experience, and the Classification of Religions, recognizes five types, the Primitive, the Polytheistic, the Mystical, the Ceremonial-Legal, and the Prophetic. A few points may be noted. As regards the claim for a Primitive Monotheism, the writer does not commit himself to it, but recognizes that a sense of power (not powers), corresponding to the unity of awareness, may have preceded the differentiation into spirits and gods. He associates Polytheism with the consciousness of property and the concrete individual, and recognizes that, in spite of limitations and defects, it contributes to civilization by its elements of progress. To the Mystical Type of Religion he is severely critical as an evasion of the problem of the relation of the Natural and the Supernatural. He recognizes the ambiguous use of the term mysticism, and his criticism is directed against what is in German called *mysticismus*, as distinguished from *mystik*. The flight to God is not a victory over the world. The two remaining types, the Ceremonial-Legal (Judaism and Zoroastrianism) and the Prophetic (the prophets and Christianity), both of which the writer embraces under the common designation of Apocalyptic as contrasted with Mystical, do recognize the problem of Dualism (Natural and Supernatural, Evil and Good), and in different ways deal with it; "the former seeks the ideal in legal righteousness, and measures the good in the world as it rewards this by material prosperity" (p. 429); the latter "also regarded natural good and evil as real and important. But, on the one hand, it did not think any of the Natural secure, or at its best as measured by possession and profit, necessarily blessed; and, on the other, it believed that the worse might have in it such abiding divine meaning and purpose as to turn its evil into good and

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its evanescence into an eternal possession" (p. 430). In religion so conceived "we deal with life and not abstractions, and with God as the environment in which we live and move and have our being, and not as an ecclesiastical formula. . . . Denying the world does not mean that we do not possess it in courageous use of all possibilities, but only that we do not allow it to possess us" (p. 471). While sometimes the condensed argument is difficult to follow, for the most part the style is lucid and graphic, with many a flash of humour in concrete illustrations. The book will amply reward more than one reading.

ALFRED E. GARVIE.

The Zermatt Dialogues. By DOUGLAS FAWCETT. (London: Macmillan & Co. 1931. Pp. xxix + 541. Price 21s.)

The Dialogue form in which Mr. Fawcett presents his new exposition of Imaginism undeniably adds to its interest, although a reviewer may regard it as purely methodological and confine his own reflections to the subject-matter. While this seems to me to contain nothing substantially novel, readers who are unfamiliar with the author's earlier volumes will find here a full and clear defence of his latest conclusions. These are, however, offered mainly as "suggestions" and "experiment"; we must "advance tentatively by means of suppositions, fancies, and guesses"; and although there is "much in the beliefs of the unsophisticated man of great value," still the book is specifically intended for "those who are in earnest with truth, and must get beyond tradition and habit." The leading principles thus advocated are that "the ultimate of ultimates is Divine Imagining. It creates entire the roots of being; we reach a metaphysics of the All-conscious." Further, "Divine Imagining" and "God" are treated as "interchangeable terms," implying "a world-principle aware of its activity"; this is "the fontal power, the reality showing through the world," but at the same time "no merely personal being." So regarded, "God does not think," but is essentially "the Artist"; and this explains the word "conscire"—"I have called the infinite activity of Divine Imagining infinite consciring."

On the other hand, the very attractiveness of the work seems to my mind to be deceptive, since it resembles the beauty of a snow bridge which tempts the climber to cross it, but plunges him into the crevasse. I mean that, viewed purely as a serious contribution to current philosophy, the discussion is impaired by grave defects. In the first place we should quite rightly anticipate that Mr. Fawcett has little sympathy with thinkers and their logical conclusions, whose "chaos would shock the reading public if it had time to take philosophers seriously." It is therefore all the more surprising to find him almost equally antagonistic to the vast majority of mystics. For "the business of a mystic is to help his hearers to conscire as he does rather than to conform to sterile logical procedure." How, then, does the author himself "help his hearers"? He begins by urging us to "dismiss as without importance most of those who are named mystics in history . . . they have little or nothing to say." Equally parlous is the condition of "the merely devotional mystic—any fool can wallow in devotion." Having thus cleared the ring of the "fool" and the historical mystics, Mr. Fawcett directs us to "the great mystic," who "has present to him fully concrete reality itself"; to "the philosophic mystic, reaching a level beyond truth"; to "the high mystic (who) desires a banquet, not this mean and uninviting meal of scraps" which sustains "the intellectual giant." The identity of the "high mystic" is certainly allowed to remain a matter of implication; but the limits of legitimate implication are very rarely so clearly indicated as in the present instance.

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Similarly as regards scientists, who with their fellow thinkers fill "the shelves of the British Museum with the results of their disagreements"; purblind intellectuals, "such men deal only with surface-phenomena connected with a fragment of Nature." So just as we must "dismiss" the mystics, we must next "ignore figments of human fancy such as matter, force, energy . . . these are dodges of men who, being unable to intuit on the great scale, have to think." Even among scientists, however, there is one exception—Professor Joseph Stark of the *Dialogues*, a physicist "mighty in the world of science," who, somewhat in the famous rôle of Dr. Watson, is permitted to supply the scientific spice which flavours the banquet of the high mystic.¹

Mankind has usually tolerated dictators, provided the autocrat was a "just beast." Similarly, perhaps, with this revival of *A Short Way With Dissenters* from Imaginism, were its author himself fairer to those against whom his own more specific criticisms are directed. But in this respect also, unfortunately, both his method and his matter are to my mind open to the most serious objections. First, as regards method: on page 22 a short quotation from Hegel's treatment of the Quantum is described as "verbiage," and then made the occasion of a feeble jest at which "we all laughed." The citation, undeniably, is highly abstract. But it could quite easily be paralleled in every great thinker from Aristotle to Whitehead, from Kant to Husserl. And the real issue, of course, is whether such indispensable technicalities are to be excluded—not to say ridiculed—simply because they spoil the epicurean banquet of the great mystic. To make the situation still worse, in almost immediately follows the statement: "Everything is its other, in so far as the other enters into it and so helps to constitute its being. It is literally qualified by this other." Thus Mr. Fawcett; now let us compare this with: "Given something, and up starts an other to us: we know that there is not something only, but an other as well; a something is implicitly the other of itself." The resemblance between the two passages is patent; the second, however, is "verbiage" from the same source as the previous quotation.² A method of argument which begins with deriding a philosopher and then immediately proceeds to paraphrase him, but with not the slightest acknowledgment, calls for no specific comment. It cannot be justified by any unawareness of Hegel's analysis of Otherness. This may very well be the case; but it plainly implies ignorance of the elements of the system which is being adversely criticized.

Equally erroneous and radically misleading is the account of "the Reason-based idealism of Hegel." "Anderton," who "once drew inspiration from Hegel," is made to describe this idealism as "the view that ultimate reality is akin to our experience. But (Hegel) fought for the wrong kind of Idealism" (p. 70). On page 102 idealists are called "men who hold that reality is fundamentally akin to their own experience." All this is certainly one type of idealism; but most unfortunately for "Anderton," and therefore for his imaginist creator Mr. Fawcett, he has here unquestionably attributed the completely "wrong kind of idealism" to Hegel himself, since this is *not* what he meant by the term. His own meaning is altogether different, and may be discovered, clearly stated with no "verbiage," in both of the English versions of his *Logic*.³ The simple fact is that "Anderton" has fatally confused the

¹ Mr. Fawcett also accepts, quite uncritically, Eddington's suggestions on Indeterminism; he ignores the protests of Lodge, Allen, and others, and misinterprets the Principle of Indeterminacy.

² *The Logic of Hegel*, p. 173.

³ *Ibid.*, pp. 67, 94, 413. *The Science of Logic*, vol. i, p. 168. For "the fundamental thesis of idealism" of. Wallace, *The Philosophy of Mind*, p. 116; *Prolegomena*, p. 293; also Reyburn, *Mind*, October 1913.

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German terms *Ideelle* and *Ideal*, and also forgotten the historical development of the word "Idea." Since he is "an Oxford don," it is to be hoped that his ignorance of Hegel is not typical of Oxford itself.

This involves, however, a still more crucial issue which can be considered quite independently of Hegel or any other individual thinker. The essential point is that Mr. Fawcett's eloquent defence of Imaginism rests, to a great extent, on a totally fallacious view of the nature of Reason and Thought. Now I have not the least desire to question the high value of Imagination in all its forms. But to orient it to reason, as Mr. Fawcett consistently does, is completely to distort its actual function within the whole of reality and of experience; so that his insistence on its importance, while perfectly justified in itself, is nevertheless ill-balanced and one-sided. He repeatedly emphasizes, for example, the part played by imagination in scientific research; but he altogether ignores such plain declarations as the following from scientists themselves: "In physics, intuition is a peculiar thing. It has recently done a deal of harm, in the province of relativity, and of the quantum theory. A careful distinction must be made between the operations of the intellect and those of fancy." "In experiments of this nature general reasoning is far from being sufficient; *everything* must be controlled by *precise mathematical* computation." Or as Husserl expresses this: "The pure mathematical disciplines are *not grounded* in observations and experiments on figures, movements, and so forth, as presented in experience."¹ It would be interesting to know whether "Professor Stark" regards these opinions as "dodges," and if so, how his own experiments and calculations were effected. Certainly Mr. Fawcett himself adheres throughout to the painfully familiar contention that thought is always and essentially abstract. "There is no supreme merit in being able to think abstractly; logic yields very little of value to philosophy." "Logical procedure," in short, is incurably "sterile," and "the best inferences (are) merely probable." Now the fact is that all this is not so much incorrect in any positive sense, as incomplete or inadequate. It is one of those fatally deceptive half-truths, much more mischievous than actual mis-statements, simply because their partial truth itself lulls the mind into a careless acquiescence. But in the first place, it is impossible for the mystic and imaginist to reproach thought with being abstract, since in order to attain its highest levels, as in great art, imagination also must be selective and to that degree abstract; and although art selects in its own distinctive way, still selective—and therefore abstract—it must remain. Again, art and imagination must *always* be selective—a simple fact far too often ignored. For the moment its selectiveness ceases, art becomes merely photographic or "realist" in this term's worst sense. *Not so with thought and reason.* In all its initial stages thought is undeniably abstract; none the less its ultimate aim, and its essential character, are to become ever more and more concrete; and incidentally, Hegel himself was as keen a critic of abstract thinking as any later pragmatist. Unfortunately, thought's initial stages are inevitably prolonged and difficult, so that the student is condemned to wander in the desert of abstraction, until finally he comes to regard it as his permanent abode. Quite naturally, but quite short-sightedly, he describes logic as sterile, inferences as merely probable and certainty as non-existent. The real situation, on the contrary, is altogether different. For while thought begins with schematic outlines which demand years for their accurate delimitation, as soon as these have been laid down, thought proceeds to fill in its abstract

¹ Planck, *Nature*, vol. cxxviii, p. 605; Andrade, *The Mechanism of Nature*, p. 138; Husserl, *Ideas* p. 93; cf. p. 94 on "fancy." (The italics are mine.)

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schemata with ever fuller detail, so that the primal desert is steadily transformed into an oasis of concreteness. This process is plainly visible in the unceasing stream of delicate and precise detail wherewith astronomy on the one hand, and biology on the other, are enriching the outline sciences of earlier days. Finally, invaluable though imagination will always be, it can never reveal the universe to the human mind in the way that concrete thought and reason, with their auxiliaries logic and mathematics, are doing. For example, imagination purely of itself will never discover the structural details of the atom and the living cell, the complex interrelations between changing species and island universes. Concrete reason alone is capable of this, as recent scientific advance abundantly proves.

This of course in no degree detracts from what Mr. Fawcett says about the value of imagination in science and elsewhere; it simply supplements his contentions by equally vital considerations that cannot be ignored. Unhappily, logic is almost always interpreted from the standpoint of textbooks and examinations; as to which we cannot better Hegel's verdict that "as exhibited in textbooks, logic has become contemptible, an irrational knowledge of the rational."¹ To sum up, the ultimate, as distinct from the initial, aim of all thought is the concept or idea, "as the greatest thinkers have held it, the intensest and most concrete just because the most highly organized phase of mental concentration."² In this respect even imagination itself becomes subordinated to the critical control of reason. Herein lies the most vital function of æsthetic criticism—the cool, detached, and even unemotional appreciation of artistic creations, though never divorced from the keenest enjoyment. Without this sanative influence, which the artist must exert on his own work, art speedily runs riot in empty fantasies and wild utopias, until man's spirit recalls it within the bounds of "sane" imagination. But here "sane" means reasonable, or even in a most profound sense logical, as all the finest poetry and drama are "rational" in essence. If we estimate philosophic and scientific works by their imaginativeness alone, they must plainly yield place to even *Alice in Wonderland*; our sole criterion consists in clarity, ordered sequence and coherence—all essentially rational and not imaginative.

But since Mr. Fawcett begins by radically mis-stating Hegel's leading principles, it is perfectly natural that he should represent his position to be that "rational thought becomes the fundamental cosmic reality." The truth is the precise contrary, since (as the author admits elsewhere) for Hegel "the system of logic is the realm of shades"—Bradley's famous ballet of bloodless categories.³ Equally inaccurate is his revival of the charge that Hegel and the "Hegelizers" maintained a "static Absolute"—"that phantom of academic philosophy, the Absolute"; in other terms the "block universe" of James's superficial analysis, uncritically adopted by his over-hasty disciples. I cannot help wondering what conceivable meaning these writers attach to "Absolute"; it seems to be an imaginal, mysterious, and fearsome "phantom" lying in wait to devour, or "transmute," or "transform," everything real. But the Hegelizers' meaning is harmless enough; Absolute denotes simply the whole of reality, the totality of existence; and why the whole of being should be styled a "phantom of academic philosophy" defies comprehension. Surely even academic philosophy is not so futile as all that, unless

¹ *The Science of Logic*, vol. i, p. 62; vol. ii, p. 247.

² Bosanquet, *Philosophical Theory of the State*, p. xliii.

³ *The Science of Logic*, vol. i, p. 69. Cf. Wallace, *Philosophy of Mind*, p. 12: "the realm of pure thought is only the ghost of the reality of knowledge, and must be re-indued with its flesh and blood." Bosanquet, *Principle of Individuality*, p. 55: "the ultimate tendency of thought is to constitute a world."

we must accept the "Oxford don" as its spokesman. Here again Mr. Fawcett has forgotten "the realm of shades," and fallen a victim to his self-created confusion between the "Absolute Idea" and the "Idea as such," which Hegel clearly distinguishes from one another. As Mr. R. G. Collingwood pointed out long ago, "the formless and empty Absolute perished in the fire of Hegel's sarcasm";¹ but this must be repeated so long as "phantoms" are fathered on academic philosophy.

This becomes still more difficult to understand when Mr. Fawcett insists that Divine Imagining itself is "changeless in one respect—It is the eternal principle of change, yet in Its very changing conserves Its character; a changeless whole as conserved originally within God; the original static imaginal field." If all this does not imply something like James's "block universe," then English is losing its significance; and even if it were a Hegelian principle, which indubitably it is not, it is quite impossible to see why Mr. Fawcett, while insisting thus on changelessness and conservation, should reject it when he mistakenly attributes it to another thinker. He appears to lack any clear grasp of the distinction between "change within the whole," which is undeniable, and "change of the whole," which cannot be ascribed to any veridical whole even if it is "perficient."² And with the supposedly static Absolute is connected a "Moloch-God, the divine tyrant who (preys) on finite agents"; plainly the "phantom" in new guise. In less extreme terms, "the Hegelian God is a whole which constitutes Truth; the truth of the system of coherent rational thought"; and whether God, thus depicted, is conscious or unconscious, is said to remain an insoluble enigma. But taken at its best, all this is quite inadequate. As Bosanquet observed, "the notion of an immanent Deity forms the very centre of Hegel's thought"; still more explicitly, "God is the absolute Person . . . the true notion of God"; Hegel's emphasis on Personality is clear. We must thus associate Truth with Personality, and also with "the Good radically and really achieved"; or again to cite Bosanquet, "nothing else than the good is real."³ To identify such principles with Moloch is even more absurd than to call the Absolute a phantom. The basal fact, which has altogether escaped Mr. Fawcett, is that Hegel was far from being the abstract rationalist he is popularly supposed to be. On the contrary, as his early work plainly shows, he was a profound mystic; and this is the secret of his obscurity. He was trying to express his mysticism explicitly and even logically; nor must we hastily assume that this is impossible. For every great poet is both mystic and thinker in one; his mysticism forces its way into articulate form, while his thought is clothed in beauty.

The critical aspect of this volume is then, in my opinion, markedly feeble; and its positive conclusions are equally defective, since they are vitiated by being fallaciously circular. This fatal weakness is, however, concealed by the dialogue form, with its frequent *intermezzi* which interrupt the arguments. In substance the final position seems to me to be as follows: To begin with, Divine Imagining is postulated as the "fontal power," of course quite tentatively; but this only means with little or indeed no positive evidence. The next step is that all actual events and objects are interpreted in the light of Divine Imagining, which as pure speculation is perfectly legitimate. But the final stage is far from being legitimate, since precisely these same actualities are appealed to in order to establish the reality of their postulated source,

¹ *The Logic of Hegel*, p. 373; *Religion and Philosophy*, p. 116.

² Cf. Stout on Change in *Mind and Matter*, pp. 101, 125.

³ Hegel's *Philosophy of Fine Art*, p. xxx; *The Logic of Hegel*, pp. 274, 373; *Value and Destiny*, p. 242.

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Imagining. The resultant circularity is easily exhibited by the following citations: "The totally bad world-system is impossible; its basic condition is Divine Imagining. All is not well with the world. But all *will* be well. For the guarantee lies in the character of the Divine Life itself" (pp. 102, 263). Now we must not permit the attractiveness of this initial standpoint to conceal its tentative, or it may be indeed its alogical nature. Actually, it is simply advanced with no positive evidence to support it, and then it is employed to explain all real occurrences; "on the divine level the best possible that is imagined is also the best possible actuality that is being realized" (p. 153). This of course, as the author repeatedly insists, raises "The Riddle of Evil"—that most recalcitrant of all problems. But on this vital issue, similarly, the complete argument forms a vicious circle. As we have seen, fontally "Divine Imagining creates with such artistry that a perfected world-system constitutes the Divine Event," and this with no reservations whatever; "creativity is radical and at work in all details" (pp. 270, 222). How then are we to explain the glaring evils that mar the artistry of the perfected world-system? These must imply (the argument proceeds) "the fundamental evil of the Metaphysical Fall, in which stable, restful Being is followed by Becoming, with its attendant host of ills"; fundamental evil is merely "given" (pp. 316, 467). The Fall is plainly as tentative as "the initial state of harmony" which it has corrupted; but when we seek for evidence of it, we are referred to those selfsame evils which the Fall is said to account for. In short, the Fall explains evil, while in its turn evil proves the reality of the Fall, just as Imagining creates the actual, while the actual establishes Imagining. With the beginning of "the time succession, at once the harmony of the divine imaginal field is lost" (p. 514); but no hint is offered as to why this fatal flaw should arise in *Divine* artistry, in the *perfected* world-system, where "evil sprouts during certain stages as inevitably as grass"; in this way "the grim and ugly events are accounted for quite simply" (pp. 416, 468). It suffices, however, to overcome the scepticism of Mr. Fawcett's *advocatus diaboli*, the "pagan poet and pessimist, Leslie." His pessimism, I believe, must have been somewhat optimistic.

J. E. TURNER.

The Scientific Outlook. By BERTRAND RUSSELL. (London: George Allen & Unwin Ltd. 1931. Pp. 285. Price 7s. 6d.)

This book, written in the author's usual piquant and lucid style, is emphatically not merely for "philosophers" or merely for students, but should interest anyone who has the least desire sometimes to reflect on the modern attitude towards life. A reviewer cannot possibly do justice to the smart phrases and interesting side-paths with which it is full, but must confine himself to saying that they make most interesting and illuminating reading, and proceed to speak a little about the main purpose of the book.

The author combines a great admiration for science with a great fear of its results. He emphasizes very strongly the paradoxical circumstance, that just at the moment when it has attained most success in its practical applications its foundations have been discovered to be most insecure, though without affecting this practical success. It has by its own admission failed to give us the truth about the world, but has succeeded beyond all expectation in giving us materially useful results. As a metaphysic it has broken down, but it has triumphed as a technique. Now this the author regards as a disaster to civilization. For science pursued as a mere technique must cease to be the pursuit of truth for truth's sake and become the pursuit

of power for power's sake, which is just one of the most dangerous ends to which to devote one's life and one of the most destructive of higher values. Science began with a love of reality which impelled men to ask questions about it, but it has found that it can only gain power over nature by putting aside these questions as unanswerable, and thus abandoning the attitude of love which drives us to seek knowledge of the object of one's love. "As soon as the failure of science considered as metaphysics is realized, the power conferred by science as a technique is only obtainable by something analogous to the worship of Satan, that is to say, by the renunciation of love."¹ The author then proceeds to draw a picture of what a society dominated by science as a technique would be, a picture that would be terrifying if it were conceivable that one tendency of man could in the long run so completely dominate the rest. The details as to the likely or possible effects of science on life are full of interest, especially when the author considers the results of the development of biological studies. He seems right in holding that the development of science makes the suppression of revolt physically easier, and therefore favours a strong governing class; but when he insists on the enormous possibilities of propaganda aided by the most advanced psychological knowledge as to the best method of "suggestion," I think his fears are exaggerated, because suggestion is no weapon once its victims know that it is being used, and therefore the spread of psychological knowledge of this tends to counteract its own evil effects. The lamentations and fears expressed on this subject both here and elsewhere are thus the best safeguard against these fears being realized, and perhaps in themselves an indication that we are less under the domain of suggestion than our forefathers.

The metaphysical conclusion to which science is supposed to point according to this book might be described roughly as being that reality is an "unknowable chaos," if I might venture to compress it into two words. "Academic philosophers, ever since the time of Parmenides, have believed that the world is a unity. . . . The most fundamental of my intellectual beliefs is that this is rubbish. I think the universe is all spots and jumps, without unity, without continuity, without coherence or orderliness, or any of the other properties that governesses love!" . . .²

"Order, unity, and continuity are human inventions just as truly as are catalogues and encyclopædias."³ But the author does not explain why he holds this view, for after stating the quasi-scientific arguments which are supposed to support it, he proceeds to demolish them very skilfully, and, I think, quite correctly. He argues that the principle of indeterminacy only seems to support indeterminism (the denial of causality) through an ambiguity in terminology, and he insists that it has not been shown, and cannot possibly be shown, that the atom is not subject to causal laws. Indeed, he himself provides the chief argument for some degree of unity in the world when he says: "All inference in regard to the course of nature is causal, and if nature is not subject to causal laws all such inference must fail. We cannot, in that case, know anything outside of our own personal experience; indeed, strictly speaking, we can only know our experience in the present moment, since all memory depends upon causal laws."⁴ That is not, indeed, a proof of causality for anybody who is prepared to admit that any suggestion he can possibly make about anything outside his own immediate present experience is totally without justification, but for anybody who cannot bring himself to go to such heroic lengths surely it is; and even if the author

¹ P. 273.

² P. 98.

³ P. 101.

⁴ P. III.

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is not deterred by these consequences from doubting causality, he can at any rate on his own admission have no justification whatever for his view that the world is totally without order. For on his own showing, either it has at least one form of order, causal order, or he is not entitled to assert anything whatever about it, even that it has not. I do not see myself why the partial failure to conceive the universe on certain specific lines should lead to this complete despair of human knowledge. Is it too much to hope that science and the philosophy based on it may reach and hold some middle ground between the dogmatism which made of science an ultimate metaphysics or rather *the* metaphysics, and the despairing scepticism here portrayed? After all, as the author says, the great changes in science do not involve the overthrow, strictly speaking, of the earlier theories, but only their replacement by something slightly more accurate. "Suppose you measured yourself with a rough apparatus, and came to the conclusion that you are 6 feet tall; you would not suppose, if you were wise, that your height was exactly 6 feet, but rather that your height was (say) between 5 feet 11 inches and 6 feet 1 inch; and if a very careful measurement showed that your height was (within a tenth of an inch) 5 feet $11\frac{9}{10}$ inches, you would not consider that that had overthrown the previous result. The previous result was that your height was *about* 6 feet, and this remains true. The case with the changes in science is precisely analogous."¹

It would be unfair to regard this book as hostile to religion, since its main object is to emphasize the non-material values for which religion stands, and to show that a science which ignores these values will only lead to disaster; but it is to be hoped that few readers will be led by the book into thinking that theists are such fools as it makes out. After all, even if Mr. Bertrand Russell does not agree with these thinkers, it should be the mark of a true philosopher to see the partial truth always hidden in the errors of an opponent.

A. C. EWING.

General Logic. By RALPH M. EATON. (London: Charles Scribners' Sons. 1931. Pp. xii + 630. Price 10s. 6d.)

Mr. Eaton states in his Preface that the purpose of the book is to introduce the elementary, but intelligent, student to logic. He strives "to cover the whole subject simply and clearly, especially to show the unity of the classical Aristotelian tradition with contemporary mathematical logic. The book is eclectic, a statement of ideas which have become—or are fast becoming—the common property of all logicians. It represents no school and has no philosophical axe to grind." Mr. Eaton acknowledges a debt to Professor A. M. Sheffer for his help with Part III, which deals with mathematical logic.

The object and scope of the book are almost identical with those of Miss S. Stebbing's *Modern Introduction to Logic*, upon the heels of which its publication treads so closely. And it is only fair to Mr. Eaton to say that had he been alone or first in the field he would have received, what anyhow he merits, the thanks of all those students and teachers of logic who have hitherto found it beyond their powers to link the old with the new formal logics for the thoroughness and clarity with which he shows their connections and their differences.

For Mr. Eaton has written an extremely good and extremely useful book. Wisely refraining from making, or even trying to make, any original contributions to the subject, he has attempted only—and his attempt seems to

¹ P. 67.

be in most points highly successful—to give to the doctrines of both Aristotelian and “mathematical” logic a clear and comparative exposition which can be understood by those who are, at the start, equipped with English as their sole language.

The plan of *General Logic* is this. In Part I a sketch is given of what Logic is, its main topics and its cardinal technical terms, including a preliminary presentation of some of the symbols employed in modern symbolic logic. Part II deals with “the Subject-Predicate Logic: the Aristotelian Tradition,” including, especially, the doctrines of the syllogism, hypothetical and disjunctive inferences, immediate inference and opposition, the extension and intension of terms, definition, division, classification and analysis and fallacies. Part III deals with “mathematical logic,” the calculus of propositions, the doctrine of propositional functions, the logic of classes, the theory of types, and so forth. Part IV deals with induction, together with the theories of probability and analogy, and is based mainly on the work of Mill, Keynes, and Nicod. There are also two appendices, one on the Boole-Schröder algebra and one containing a set of problems and exercises for students.

There is an index of proper names and an index of subject-matter. It would perhaps have been a convenience if a glossary had been added of the symbols used in modern symbolic logic.

In Part I Mr. Eaton gives a clear and brief account of the way in which logic is *formal*, and introduces the reader to the “proposition” terminology. He does not profess to give an elaborate philosophical theory of “propositions,” though he shows what the problems are. It is my personal view that the “proposition” theory is false, and, accordingly, that a terminology could and should be found for formal logic which would not imply its truth. But it also seems to me that it is a good thing for the student of formal logic to pass through the stage of believing in “propositions,” so I would not have had Mr. Eaton start otherwise. On the other hand, when drawing the distinction between implication and inference, he does seem to me to be speaking misleadingly when he says that in drawing an inference we go beyond seeing that the consequent is implied by its premisses to *asserting* the proposition which is the consequent. For it is only when “proposition” means the same as “sentence” that it can in the ordinary sense of the term be *asserted*, whereas Mr. Eaton is not taking “proposition” in this sense.

In Section 10 of Part I the distinction is made, which is basic for his distinction and correlations between Aristotelian and mathematical logic, between those “atomic logical forms” which are of the subject-predicate type and those which are of the relational type. I shall try to show later that Mr. Eaton has left here some important gaps to be filled in. In Section 11 the modern treatment of general propositions as opposed to singular propositions is contrasted with the traditional treatment of that topic—of course in favour of the modern analysis; and we get our first introduction to the notion of the propositional function.

Thus, before the reader begins to study the traditional formal logic, which has for its centre the doctrine of the syllogism, he is forearmed against the superstition that formal logic has said its say when it has investigated the figures of the syllogism. But he is also forearmed against the contrary superstition that Aristotelian logic is only a sham formal logic.

Part II contains the traditional doctrine of the syllogism. Here Mr. Eaton follows, and indeed largely quotes from, the *Port Royal Logic*. He is, perhaps, rather over-sympathetic to the extensional treatment of syllogisms, and, though he makes it plain that there is another interpretation of a syllogism than that which reads it as a set of class-inclusions, the attractive, graphic

simplicity of Euler's intersecting circles is liable to tempt beginners into the belief that they do represent what syllogisms are really saying. Perhaps, too, his sections on the reduction of syllogisms ought to contain a discussion of the question whether the "imperfect figures" of the syllogism do not have their own special logical functions to perform such that the whole programme of reduction is a mistaken one, involving as it does the error that the second and third figures are somehow weaker proofs than the first figure instead of being proofs of different sorts of things.

Mrs. Ladd-Franklin's device of the "antilogism," as expounded by Mr. C. I. Lewis, is described in detail. This, too, would receive illumination from a discussion of the value as distinct from the formal possibility of reduction.

No special comment need be made on Mr. Eaton's discussions of Mill's attack on the syllogism, of hypothetical and disjunctive "syllogisms," or of dilemmas. These topics have already been well aired, and Mr. Eaton does the only thing which is required, namely, of showing the source of the mistakes which have confused or ruined certain traditional accounts of these matters.

His treatment, however, of the modern problems of material *versus* formal, or, as he calls it, necessary implication, though brief, is helpful to those who have no access to the sources of, for instance, the paradox of material implication. It would have assisted the student if Mr. Eaton had explicitly declared that when Russell says "*p* implies *q*" is equivalent to "*p*-true and *q*-false-is-false," the word "implies" is a term of art, and does not mean, or pretend to mean, what the word "implies" means in ordinary use. Nor is his own description of necessary or formal implication as "a connection of meaning which legislates for fact" quite adequate. For, unless he is using "meaning" in a special sense of his own, "a meaning" is nothing but what an expression means; and there is no reason to suppose that implications are by-products or adjectives of expressions.

In his chapter on the Extension and Intension of terms Mr. Eaton seems hardly modern enough. He appears to follow Mill rather too closely, and so takes it for granted that there is some sense—though perhaps not Mill's—in which a term has *both* denotation *and* connotation, and consequently does not explore the question what it is for a symbol to denote a thing or to be a description of a thing. He says, what is surely false, that "the extension or denotation of *American citizen* is all the American citizens—George Washington, P. T. Barnum, Buffalo Bill, etc. . . ." But it is plain that *American citizen* never ran a circus, so it does not denote Barnum; and that *American citizen* is not so many millions strong, so it does not denote the totality of American citizens. In a word, *American citizen* is not an expression which as it stands can function as the subject of a sentence. It is not a denoting expression at all. The same is true of general nouns and adjectives such as "man," "machine," "hopeful." There are plenty of particulars of which it is true that they are men, or machines, or are hopeful, but none of them is called "man," "machine," or "hopeful." The doctrine of incomplete symbols, which Mr. Eaton seems to accept in certain special connections, will, if generalized, necessitate a thorough overhaul of the whole topic of denotation and connotation. Will not Mr. Eaton in the—I hope numerous—later editions of his book reconsider together all the subjects at present separately listed under the titles Connotation, Denotation, Intension, Extension, incomplete symbols, and categorematic and syncategorematic words together with the notions of naming, designating, signifying, indicating, standing for, referring to, and applying to? He might then avoid calling such expressions as "any man," "every man," and "a man" *logically ambiguous* (which he distinguishes from *equivocal*), since if they are not denoting expressions at all, it is mean-

ingless to advertise the fact that they do not denote a specified individual in particular and to say that, instead, they refer to an undetermined member of the class man.

Before leaving Mr. Eaton's exposition of the traditional formal logic, I should mention that while he gives quite a full account of the doctrine of the Predicables, he refuses to deal with the subject of the "Categories." Here, I think, he is wrong, and the omission seems to me important. For Mr. Eaton quite properly, I think, urges that the chief difference between Aristotelian and "mathematical" logic is that the former confined itself to propositions of the subject-predicate form and to the inferences, compound propositions, fallacies, etc., which can be unpacked into propositions of that form, and even that in many cases it erroneously treated as if they were of that form propositions which are not so, *e.g.* general, hypothetical and relational propositions.

But the phrase "subject-predicate form" is highly ambiguous. Taken literally, it should signify a *grammatical* structure embodied in sentences in the indicative. The grammatical subject of a sentence is the verbal element in a sentence which signifies the topic which is being talked about, and the predicate is the verbal element which consists in what is said about that topic. That Socrates is her husband is the predicate element in "Xanthippe is married to Socrates," if it is Xanthippe who is being discussed; and that Xanthippe is his wife is the predicate element in the sentence when we are talking about Socrates. "Subject-predicate" is a grammatical umbrella-title for the form of any sentence in the indicative, be it singular or general, attributive or relational, categorical or hypothetical or disjunctive.

What Mr. Eaton intends to say is that Aristotelian logic confined itself to propositions where a general character is predicated of a subject, *e.g.* Socrates is a man, Socrates is mortal, Socrates is angry, etc.

But except in being non-relational, it is not evident that these propositions are of the same form. Is ". . . is a man" the same *sort* of "predicate" as ". . . is wise" or as ". . . is feverish"? Is there no formal difference between stating that something is of a certain kind, that it has a certain quality, and that it is at a given moment in a certain state?

Doubtless Aristotle did not tell the whole story when he listed his ten different ways in which something may be said to be so-and-so. But at least he was beginning to draw distinctions which are glossed over when propositions are classified as being *either* of the S-P form *or* of the *aRb* form, etc.

In short, whatever criterion enables Mr. Eaton to say of given propositions that they are or are not of the "subject-predicate form," it is arguable, and seems to me true, that there are several forms, irreducibly different, which are lumped together under that title. For, take the following questions about Socrates: What is he? What-like (*qualis*) is he? How big is he? Where is he? In what condition is he now? What is he undergoing? What is he doing? etc. All answers to any of these questions will be grammatically of the subject-predicate form; and some of them will not be of the *aRb* form; yet of those which are not of the *aRb* form none which answer any one of the questions will answer any of the others.

No quality of Socrates gives "Socrates is a man"; nor does any proposition of the form "Socrates is a so-and-so" answer any question of the types *Qualis est?* or How big is he? or In what condition is he now?

It has often been objected against traditional formal logic (*e.g.* by Cook Wilson and later by Ramsey) that it mistook the purely grammatical form of sentences, which is properly called the "subject-predicate form," for an objective or logical form. So it seems a pity that an exposition which is

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meant to exhibit what is valid in the traditional logic should acquiesce in this confusion or mistake.

Part III of *General Logic* is entitled "Mathematical Logic," and gives what appears to me (an amateur) a lucid and reliable introduction to the subject. Mr. Eaton bases his treatment mainly upon *Principia Mathematica*, the *Principles of Mathematics*, C. I. Lewis's *Survey of Symbolic Logic*, as well as articles and personal utterances of H. M. Sheffer. The developments of the subject in the hands of Wittgenstein, Ramsey, etc., are not dealt with.

He might perhaps make it clearer at the start of his treatment that mathematical logic does not itself profess to be a completely general formal logic, but only such a development of formal logic as shall exhibit the foundations of pure mathematics. So that though some and perhaps most of the most important topics in general formal logic have to be discussed, the discussion of them is canalized by the interest in the special question of the foundations of mathematics; with the result that, for instance, the extensionalist emphasis and the exhaustive treatment of the calculus of classes have a place in mathematical logic which is considerably bigger than that which they would have in a perfectly general formal logic.

In general Mr. Eaton makes it easy for the student to master the symbols as well as the technical terms employed in modern symbolic logic, as well as to understand the procedure and purposes of its arguments.

In Part IV the problems of probability, induction, and analogy are clearly and carefully presented. Mr. Eaton states and seems to accept Keynes's theory of probability as a relation between data and a proposition. He is probably well advised in refraining from entering into a discussion of the philosophical difficulties that have been found in the theory of probability-relations, though he is a little rash to speak as if subjective or psychological theories of probability need no longer be seriously considered.

He gives a good account and criticism of Mill's methods, and, for the space that he can allow to the matter, a very useful summary of Keynes's theory of induction. Nicod's objections to any purely *informative* theory of the probability of inductive inferences are stated, and a sketch of his suggestions for a theory of probable inferences based on pure induction practically completes Mr. Eaton's treatment of the subject.

It is no discredit to Mr. Eaton that the problem of induction is thus left rather in the air.

May I make one or two suggestions to Mr. Eaton for future editions of his book? One I have already mentioned, namely, that with the other indexes a glossary of symbols employed in modern symbolic logic should be supplied. Another is that a short bibliography of the classical works and the best introductions to the special subjects should be attached to Parts I, II, and IV. There is already one for Part III.

I notice three misprints. On page 1 (footnote) "brief" is misprinted; on page 3 "we" is misprinted. On page 246 for "subjunctive" read "subjective."
G. RYLE.

Knowledge, Belief, and Opinion. By JOHN LAIRD. (New York and London: The Century Co. 1931. Pp. xi + 514. Price \$4.)

Readers of Professor Laird's writings will not need to be assured that this volume of 500 pages is full of the most excellent matter. The ground covered is indeed so comprehensive, and at the same time the treatment of many of the multifarious issues in his close-packed survey is often so succinct, that

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the reviewer attempting an epitome has as disheartening a task as would be the attempt to compress the essence of Bovril into a lozenge.

A word as to the general character of the book. It has as a whole qualities which the author admits of one section: it is "tortuous, sinuous, and involuted." This is merit as well as defect. The detours and meanderings of the argument serve to loop into Professor Laird's survey topics and discussions bearing on his general inquiry which a more forthright style of treatment might well have omitted or neglected. But some readers will probably feel as they lay down the book that they have not so clear an understanding of the author's position in the large as in the detail of his argument.

Professor Laird's intention is "to examine the nature and mutual relations of knowledge, belief, and opinion, or, in other words, to attempt the survey of what is usually and, I think, correctly described as the cogitative part of our nature." He divides this survey into four books and twenty chapters. In the first book we have an introductory chapter, mainly a provisional marking-off of the ground and of the main terms to be employed, followed by two chapters that discuss the "place of epistemology in philosophy" according to a number of thinkers, first Locke, Hume, and Kant (the author's sympathy being avowedly more with the first two than the last), and then more recent philosophers. (In the preliminary chapter the ambiguities of the term *evidence* might have been more fully discussed: to say that knowledge is evidence (p. 11) does not square with one common meaning of the word.) In his remarks on Locke, Professor Laird contraverts effectively the "prevalent view" that Locke was an "empiricist manqué or an empiricist slightly bewildered." "Indeed, Locke, in a strong and even a prepotent part of him, was a rationalist after the order of Descartes" (p. 27). Locke is "completely misunderstood by those commentators who represent him as holding that the understanding is either entirely or essentially passive" (p. 61). (The misrepresentation is presumably due to the Procrustean habit of exposition: Locke has to be fitted into the "Empiricist" pigeon-hole, as Spinoza into the Cartesian.)

The account of Kant stresses the Leibnizian element in his teaching of the supremacy of the rational faculty.

Professor Laird then gives an illuminating discussion of the priority of "theory of knowledge" in philosophy. Mental faculties cannot indeed be studied apart from their use; and so studied we are driven to recognize some sort of hierarchy of mental functions with the hegemony awarded to intellect over sense. Can we conclude that the study of our mental faculties has logical priority over the direct study of being? It may be true that our minds are *more easily* known than anything else, but it does not follow that they must be *better* known. Six arguments in favour of the latter view are considered and dismissed. Particularly refreshing is Mr. Laird's brusque dismissal of the Italian Neo-Idealist doctrine of the *atto puro*, and his exposure of "the common cliché that being human we can only interpret things humanly" as meaning "as nearly as possible, nothing at all."

The second book deals with "The Nature of Knowledge, Belief, and Opinion" as they have been severally interpreted. Knowledge, being a cogitative fact, is not simply unhesitating assurance in action (Samuel Butler); nor the culmination of successful purposive adaptation via doubt and question (Dewey). If its function may be instrumental, its essence is 'gnostic.' Earl Russell's (earlier) doctrine of knowledge by acquaintance is criticized briefly; and Cook Wilson's radical distinction between knowledge and judgment-processes at greater length. Professor Laird passes a severe judgment upon the advocates of an ultimate noetic insight that transcends the scope of 'logic.' (But in saying (p. 127) that there is "something more than amazing

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in the doctrine that insight should pass into mystery or that knowledge in its purest form should become ignorance," we have, I suspect, a *petitio principii* due to the ambiguity of the term "mystery." The point, I take it, in the view criticized is that a mystery is *not* a mere *ignotum*.)

On Belief and Opinion we are given discussions of the views of Hume, the Mills, Bain, and William James; of the relations between Belief and Volition, Belief and Emotion, and Belief and Imagination. Here the author's argument flows in limpid reaches over familiar ground. He might perhaps have dealt rather more fully with the status of beliefs (or opinions) entertained upon authority deliberately accepted as adequate. Sir J. M. Barrie's Bowie Haggart's judgment that Burns's works, which he had not read, were "of an immoral tendency" is quoted apparently as an example of bad logic (p. 167). It is not easy to see why. If I opine (or even believe with entire conviction) that Pushkin, of whose works I have no first-hand knowledge, is a fine poet, my judgment is unoriginal, but why is it illogical or irrational? I am convinced by the overwhelming weight of authority in support of it, just as Haggart may have relied upon the authority of persons in whom he placed absolute trust. The nature of the belief (or knowledge) a man has regarding the veracity of another person or persons has not perhaps been sufficiently dwelt on; nor in consequence the distinction between opinion admitted or absorbed by suggestion and adopted reflectively though "upon authority."

In the third and longest book Professor Laird discusses "The usual Certainties," and many readers will probably find this the most interesting and admirable part of the volume. The "certainties" of the traditional logic, and of mathematics, and the claims of moral and æsthetic experience, sense-experience, introspection, and memory, to give "certain" knowledge are considered in succession with much penetration. The ground covered is, to be sure, well trodden, but Professor Laird often puts old points in a refreshingly new way. I cannot possibly mention all the matters on which he has observations of importance to make. I merely note a few of them. His gallant defence of that unpopular and rather dowdy client Formal Logic, the criticism of the doctrine of the specious present (p. 277), and of the "illegitimate assumption that because anything, say *x*, *seems* such and such, therefore it must be conceded that a distinctive entity exists, *viz.* the 'seeming' or 'apparition' of *x*" (pp. 229 ff.), and the *caveat* against the popular view that modern physics is on the side of mentalism (p. 286). In the chapter upon the knowledge of other minds Professor Laird, in combating the formerly popular view that the origin of other-consciousness is by inference from self-consciousness surely goes too far in saying that the latter is "for the most part posterior" to the former (p. 342). The truth seems rather that the two develop in strictly parallel fashion by mutual interplay.

The contents of the third book is, in large measure, matter that the author has discussed in greater detail in his other writings. There is greater novelty, I think, in the concluding book on "Presumption, Faith, and Probability." All probability, he concludes, is "from the start at least semi-logical," and not concerned merely with subjective factors, while *a priori* probability is really a certainty, "since it is an enumeration of the logical structure and proportions of alternatives *qua* alternatives." In the chapters upon "the categorical pre-connexions" and the basis of induction, Professor Laird is at his best. These chapters are a successful contribution to removing the "scandal" which Dr. Broad, a few years ago, found the philosophical theory of induction to be. Kant once again comes in for some rough handling. To-day is doing its candid best to correct the later nineteenth-century Oxford and Glasgow veneration of Königsberg. On the other hand, the entire failure of Mill's empiricist theory

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of induction is here also put as well as it has ever been; and the author's avowed predilection for Hume does not lead him to attempt to defend Hume's own inconsistencies and inadequacies on these matters.

In his final chapter Professor Laird discusses Faith. We have a summary of some typical interpretations of faith by great Christian dogmatists—Paul, Augustine, Aquinas, Luther, Calvin, Schleiermacher, Ritschl. The theology of faith is then used to illuminate the topic in its philosophical as distinct from its specifically religious aspect, and in particular the part played by faith in the domain of inductive science. Professor Laird is, naturally, hostile to the claim to make "large drafts upon faith" "without troubling ourselves overmuch whether we have any 'cover' for them in the way of ascertainable evidence" (p. 492). Yet in our "problem of constructing an integrated pattern" in the study of nature we "need faith, and again faith, and faith yet again"; and our trust in our own cogitative faculties is "wholly authentic faith" (pp. 494, 496).

I close this notice of a valuable book with a (very diffident) word of cavil and a word of special thanks. Professor Laird has a fastidious care for words which often strikes out phrases of an astringent novelty, but which occasionally, it must be confessed, pushes him in his distaste for *clichés* into wilful preciousness (e.g. "proleptic obumbration"), while it is to be surmised that not all of his word-coinages (e.g. "epidoxaston," "underhat" philosophy) will survive. The word of thanks is for the admirable bibliography and index which concludes the volume. *O si sic omnes!*

JOHN W. HARVEY.

Scepticism and Construction. By CHARLES A. CAMPBELL. (London: George Allen & Unwin Ltd. 1931. Pp. xxiv + 322. Price 12s. 6d. net.)

The conjunction of scepticism and construction in the title of Mr. Campbell's book may be at first sight to many somewhat puzzling and may suggest something rather daring; but he soon succeeds in defining his position, presenting a thesis that is simple, though of great philosophical importance, and developing his argument with exceeding clarity, fairness, and firmness, yet with moderation, except perhaps for a little impatience with the scientific point of view. In general he advocates a view which in its main philosophical character is a return to the position of Kant as the fundamentally sound one, and which is opposed to the central conception of Absolute Idealism that the real is rational and is transparent to the human intellect. He argues for a metaphysical scepticism, expressed in the doctrine that ultimate reality is supra-rational, supra-relational, and unknowable by the intellect. The position of F. H. Bradley, for whom he expresses high appreciation, provides a starting-point, Bradley's epistemological scepticism, in spite of its hitherto repellent character for many readers and in spite of its responsibility for the failure to gain adherents, being boldly accepted by Mr. Campbell as a basis for the first part at any rate of his own metaphysical theory.

While, however, there are these affinities with Kant and Bradley, there are likewise points of divergence. There is much in Bradley which must be rejected as really inconsistent with his fundamental thesis—the doctrine of the degrees of truth in particular and some others. The epistemological position is also not the only one on which metaphysical scepticism can be defended. Evidence is obtainable from various other spheres, and it is an interesting point about Mr. Campbell's book that about two-thirds of it is devoted to ethical questions with which he shows himself peculiarly in earnest and with which he deals

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in a very effective way. While agreeing again with Kant in this moral emphasis, he uses the analysis of the moral life, however, as an argument for metaphysical scepticism. While disagreeing with Absolute Idealism, on the other hand, he continues to use much of its terminology which to its non-adherents involves much confusion. He commits himself, in reference to religion, to the highly questionable statement that what would ultimately satisfy the self is *nothing short of being the whole*. But when all is said, Mr. Campbell succeeds in developing an original and impressive argument which deserves study and will be followed easily by those acquainted with Bradley and will be specially beneficial to Absolute Idealists.

The epistemological argument, as with Bradley, is made to turn upon the conception of non-contradiction; but for those who are not prepared to accept Bradley's nor Mr. Campbell's logic, both the employment of this conception for metaphysical purposes and the interpretation given to it remains disputable. In spite of reiteration in textbooks it is not evident even that in a proposition of the form *A is B* not—*A* can justifiably be substituted for *B*, so that *A is B* can be read as *A is not—A* and that hence the proposition must be declared to involve a crass contradiction. And it is somewhat significant that Mr. Campbell has to admit that the conception of contradiction is not valid for ultimate reality in the sense in which it is valid for the intellect, and that there are thus two kinds of self-consistency, one of them being unknowable.

The ethical discussion is concerned with moral freedom, moral obligation, and moral valuation. Mr. Campbell stresses here the *incorrigibility*—necessarily, of course, intellectual or phenomenal in view of his metaphysical scepticism—of certain features of experience. At this point he comes into conflict with much in Absolute Idealism, especially its doctrine of the intelligibility of the real and its implication of a rationally continuous universe which would lead to the rejection of freedom, though he manages at the same time to accept its psychology of desire. His emphasis upon the implication of the *can* in the *ought* leads him to assert that "morality and therefore ethical theory has to do essentially with *personal* worth as manifested in conduct." The object of moral valuation must be what the agent *can* do, what is strictly his own, and what is strictly his own is his will-energy—a conception which is elaborated at considerable pains, and which suggests, if not quite the rigorism, yet the formalism, of Kant in the principle of "devotion to the ideal." Concrete content of the will is ruled out on the ground that it is not wholly within the agent's control and that it does not constitute the man.

The difficulty which Mr. Campbell has in mind is clear enough and in practice acute enough. But, on the other hand, a criminal bred in criminal circles may be only a more extreme case than the slum-dweller, and he may be devoted to his ideal. Are the law and morality to be supposed so much at variance, and is the punishment inflicted to be considered analogous to the persecution of Gandhi? Nor is it quite the conception of *ought* and *can* that drives Mr. Campbell to his conclusion, but it is the individualistic meaning which he attaches to *can* and hence to *ought*. *Can* and hence *ought* may be given a wider meaning in reference to possibilities opened up by advances in human knowledge or in reference to what the nature of reality permits in contrast to arbitrary human arrangements. If Mr. Campbell says that this may constitute valuation of some sort but not moral valuation, he is limiting the term *moral* in a way which lays him open to the kind of objection which he himself makes in discussing whether there is an obligation to be prudent. "The only reason for denying to this obligation the title of "moral" seems to be the quite arbitrary one that the objector has already defined morality to himself in terms which exclude egoistic ends. But definitions if they are

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not to be purely formal must wait upon experience, not dictate to it." The difficulty in ethics is just to agree about the term morality and to exclude from it what is a matter of individual habit and individual emphasis.

Finally, Mr. Campbell's readers may remain somewhat puzzled as to the exact rôle played by his doctrine of reality. It is not clear whether in taking his stand on metaphysical nescience he is intending to deny that reality has any significance for the moral life or whether only that such significance is known. It does occur to one at times that Mr. Campbell's doctrine permits him, as the Epicureans are traditionally regarded as having done with the gods, to push reality out of the way and get on with a phenomenal or empirical investigation.

B. M. LAING.

Philosophies of Beauty. By E. F. CARRITT. (Oxford: Clarendon Press. 1931. Pp. 334. Price 15s.)

In this country Beauty seems to be the Cinderella among the daughters of Value, although she is by no means younger than Truth and Goodness. Few of our philosophers pay her attentions. Mr. Carritt is a notable exception. His *Theory of Beauty*, modest in compass, but with distinction in every page, is one of the very few serious introductions and contributions to the subject that have been produced here this century. His present book is one of those further helps to the student that our time of day, with its unmanageable accumulation of literature on each branch of knowledge, makes increasingly necessary. It is a source-book, a collection of excerpts from seventy-four philosophers and other writers on æsthetics—a regrettable necessity, perhaps, but still a necessity, for we have nothing else of the sort in English, and in the hands of Mr. Carritt it really ceases to be regrettable at all.

The excerpts begin with Xenophon and end with Robert Bridges. All the philosophers of note who have written at all about Beauty are included, but the net has been cast more widely to include poet-theorists like Wordsworth, Shelley, and Coleridge; literary theorists like Lord Kames; art-critics like Ruskin and Clive Bell; and painter-writers like Hogarth, R. A. M. Stevenson, and Roger Fry. Even so recent a book as *The Right and the Good*, by the Provost of Oriel, is represented, and the Proceedings of the Aristotelian Society and *Mind* have yielded two admirable passages from the pen of Mr. Leon (who must surely give us before long an extended expression of his clear grasp of æsthetic problems). Few of the extracts run to more than a page or two; most space is given to Plato (28 pages), and after him to Kant, Hegel, Schopenhauer, and Croce.

It would be petty to criticize the editor's choice of quotations. So wide a field can of necessity be only scantily reflected in a single volume. Rightly, I believe, he has not ruled his choice by any one principle. Here and there a passage is inserted because of its literary aptness; in more cases because something really worth while is being said somehow; sometimes as representative of a period; elsewhere because of the philosophical reputation of the writer. Naturally, the last class comprises the least useful of the extracts, though it was necessary to include it, for one would turn to a book of this kind to see what, say, Hobbes or Leibniz had to say about Beauty, and it is of some use to find that what they said was fugitive and trivial. To complain that many of the extracts are too short would be captious, for the space within a book is not elastic; and, after all, the function of little more than a page from Bosanquet or of even sixteen pages from Hegel is not to stand as a

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substitute for these thinkers' books, but to whet the reader's appetite and direct him to the easily accessible sources, which in every case are accurately indicated.

The value of the book is greatly enhanced by the minute care of the final editorial work. Mr. Carritt, besides introducing some of the writers with concise statements of the general lines of their theories, has annotated the passages with a copious apparatus of cross-references which weave the whole book into a pattern of delightful and often surprising correspondences. These references and the full index of subjects which supports them make the book readily available for consultation on any æsthetic topic. Although the translations are mostly by the editor himself, references to current translations are given, with one or two omissions—for example, it would have been helpful to mention alongside the Loeb version of Xenophon the more accessible version in the Everyman Library, and to note the versions of Marcus Aurelius by Long and by Rendall in addition to the older ones by Casaubon and Collier.

A book unique of its kind in English and compiled with the wide scope and care for detail of a scholar like Mr. Carritt should be welcomed without reservation. Mr. Carritt's heavy labour has lightened the load of the student, given the teacher an extremely useful auxiliary, and provided a suggestive book for all those who are interested in the intangible aspects of the fine arts.

T. E. JESSOP.

Collected Papers of Charles Sanders Peirce. Edited by CHARLES HARTSHORNE AND PAUL WEISS. Vol. I, Principles of Philosophy. (Harvard University Press and Milford. 1931. Pp. xv. + 393. Price 31s. net.)

To most students of Philosophy in this country Charles Peirce is little more than a name. He is known to have been claimed by William James and John Dewey as the inventor of the formula which they have taken to contain the principle of Pragmatism. From this it has been assumed that he was the real founder of that doctrine. Those who accepted it, having little of his work in available form, and on the other hand having all the law and the prophets in James and Dewey, have commonly been content to have him canonized as such, and for the rest to leave him on his niche. Those who reject the doctrine have for the same reason been even more content to leave him to neglect. Those who knew Peirce in the flesh in the latter part of last century, and up to his death in 1914, had an entirely different idea of his work in philosophy, and an entirely different estimate of its importance. To them he appeared as one of the brilliant group who, with James and Royce at their head, lent lustre to the study of Philosophy in the Cambridge of those days. So far from depending for his place as a thinker on what other men made of a formula and a name which meant to him something entirely different from what they took it to mean, he was known as engaged in the revival of a form of scholastic Realism, and in the application of it to revivifying the study of logic, and all that depended upon it. Few of his contemporaries approached the study of philosophy with the same variety of training, in great part self-given, in physics, mathematics, medieval and modern philosophy. None was devoting himself in America with the same genius and single-hearted devotion to his chosen field of the foundations of logic which he believed were also the foundations of mathematics, and of any metaphysics that was worth having. Unfortunately, owing to his methods of working, which were as erratic as some of his opinions, and the necessity he was under

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of earning his livelihood by reviewing and such lecturing work as came his way, he left nothing in book form that could bring together and represent the fruits of his thought as a whole. Like Coleridge, of whom in this respect, as in much which he actually did write, he often reminds one, he was apt to project vast schemes (among others, we hear in this volume of a work under the arresting title of "A Guess at the Riddle," which in his own words was to be "one of the births of time") that by their very magnitude seemed to paralyse him. The papers that actually saw the light apart from book reviews number some seventy-five, and cover a great range of subjects. But besides these he left behind him a mass of manuscripts which, exclusive of fragments, numbered several hundreds. It is with the object of rescuing these from the neglect into which they were in danger of falling that the editors have set themselves, with the assistance of the Philosophy Department in Harvard University, to the pious but laborious task of sifting them for publication in a succession of volumes of which this is the first. Call no editor happy till the end, but as far as they have here gone, Dr. Hartshorne and Dr. Weiss are to be congratulated on the lucidity of their arrangement of material which reflects in outline the range of Peirce's interests, and the vigour and freshness which he brought to every subject he touched. There is only here space to mention the titles of the "Books" into which the volume is divided with one or two of the main chapters and sections in each. Book I is on "General Historical Orientation," and includes sections on "The Spirit of Scholasticism," in which Duns Scotus and William Ockham are described as "two of the profoundest metaphysicians that ever lived"; on Kant, and on Hegel, whom the author describes as "in some respects the greatest philosopher that ever lived." Book II, on "The Classification of the Sciences," is more technical, and perhaps less important from the point of view of what is characteristic of Peirce's own contribution to philosophy than Book III, entitled "Phenomenology," with the fragments of his proposed work, "A Guess at the Riddle," already referred to, the long discussion of the place of the triad in science and philosophy, and the sketch of a recast of the whole theory of the categories which it contains. Whatever we think of this theory as an improvement on Kant's, or Hegel's, equally with theirs it calls for an effort which perhaps every reader will not be prepared to make, but which, if made, will assuredly have its reward. If he baulks at it, he will find more easily enjoyable matter in the alternations of witty if sometimes wayward paradox, and philosophical penetration that mark the last book on the "Normative Sciences." The volume is provided with excellent indexes of Proper Names and Subjects, for which the student who desires to consult it for special purposes will offer thanks to the editors. I may end by wishing them all success in their arduous undertaking, but I may also be permitted to surmise that when all is done we shall have to say of Peirce what one of their own countrymen has said of him. His was one of those "germinal minds" which, while rarely appearing, when they do appear are to be judged not by what they have actually accomplished in the way of writings, but by the stimulus they have given to other minds. In spite of the pretentious schemes he projected, we know from his own words (p. 360) how humble his personal ambition as a scientist and philosopher actually was. "As long as they (the sciences) are not looked upon as practical and so degraded to pot-boiling arts . . . whether the pot to be boiled is to-day's or the hereafter's, they are all such that it would be far too little to say that they are valuable to us. Rather let our hearts murmur 'blessed are we if the immolation of our being can weld together the smallest part of the great cosmos of ideas to which the sciences belong.'"

J. H. MUIRHEAD.

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An Essay concerning the Understanding, Knowledge, Opinion, and Assent.

By JOHN LOCKE. Edited with an introduction by BENJAMIN RAND, Ph.D., LL.D. (Cambridge (U.S.A.): Harvard University Press. 1931. London: Oxford University Press. Pp. lx + 307. Price \$3.50; 15s.)

Locke's private papers passed at his death to his friend, Lord King, from whom they descended to the Earls of Lovelace. Dr. Benjamin Rand, of Harvard, who is well known to students of philosophy as the compiler and editor of *Modern Classical Philosophers*, has had access to this collection, by permission of the late Earl of Lovelace, and he has already published from it the correspondence of Locke and Edward Clarke. The present work, which is also included in the Lovelace collection, and which has never before been printed, is of particular interest, for it is actually the first draft of Locke's celebrated *Essay concerning Human Understanding*. The complete *Essay* was first published in 1690, after Locke's return from his retirement in Holland. It is well known that he had been engaged upon the writing of it for a considerable time. But it will probably come as a surprise to most readers to learn that the draft was written no less than nineteen years before (the date, 1671, is in Locke's own hand); indeed, it was written in the very year of the famous meeting "with five or six friends," which first turned Locke's thoughts to epistemological questions. The draft is only about one-fifth of the length of the complete work. Locke did not divide it into books and chapters, but only into sections; and it forms—in appearance, at any rate—a single continuous argument. (Indeed, the title "An Essay" seems to fit the draft much better than the complete work.) Nevertheless, and this is perhaps its most interesting feature, it contains all the most characteristic doctrines of Locke in a perfectly explicit form, often in the very words of the complete work: for instance, the attack on Innate Principles, the positive "empiricist" thesis that all ideas are derived from sensation or reflection, the distinction between simple and complex ideas, and the division of the latter into ideas of Substances, of Collective Substances, of Modes, and of Relations. The celebrated and much-criticized distinction between Primary and Secondary Qualities is not, it is true, stated in those words; but it is clearly present to Locke's mind in § 60.

Dr. Rand has written an introduction describing briefly the history of the draft and adding a pretty full summary of the main doctrines contained in it. He has also printed at the top of each page of the text a reference to the corresponding book, chapter, and section of the complete work.

There can, of course, be no question of the great importance of this book to professional historians of philosophy. And it is at least conceivable that not only the historian of philosophy but the philosopher may find it worth consulting. For the complete *Essay* (even in Professor Pringle Pattison's admirable abridgment) is so long, and so much broken up, that it is only too easy to lose sight of Locke's main argument in a multitude of details.

H. H. PRICE.

Books received also:—

Proceedings of the Seventh International Congress of Philosophy (Ed.: Gilbert Ryle). The Oxford University Press. London: Humphrey Milford. 1931. Pp. xxxv + 522.

S. PARTHASARATHY, M.A. *The Tarka Samgraha of Annam Bhatta*. Published by the author. Madras, 1931. Pp. xxvii + 172. Rs. 3.8.

CLARENCE L. F. GOHDES. *The Periodicals of American Transcendentalism*. Durham: Duke University Press. 1931. Pp. v + 264. 20s.

JOHN BUTLER BURKE. *The Emergence of Life*. Oxford University Press. London: Humphrey Milford. 1931. Pp. viii + 396. 30s.

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- R. E. MONEY-KYRLE, M.A., Ph.D. *The Development of the Sexual Impulses*. (International Library of Psychology, Philosophy, and Scientific Method.) London: Kegan Paul, Trench, Trübner & Co. 1932. Pp. ix + 219. 10s. 6d.
- RUDOLF OTTO. *Mysticism of East and West: a Comparative Analysis of the Nature of Mysticism*. London: Macmillan & Co. 1932. Pp. xvii + 262. 16s.
- LEONARD A. LYALL (Translator). *Mencius*. London: Longmans, Green & Co. 1932. Pp. xxviii + 277. 12s. 6d.
- SIR J. ARTHUR THOMSON, LL.D. *Purpose in Evolution* (Riddell Memorial Lectures). Oxford University Press. London: Humphrey Milford. 1932. Pp. 55. 2s. 6d.
- NICOLAI HARTMANN (Tr. Stanton Coit; Introduction by J. H. Muirhead.) *Ethics*. Vol. I. *Moral Phenomena*. London: George Allen & Unwin Ltd. 1932. Pp. 343. 12s. 6d.
- W. A. WILLEMSE, M.A., D.Phil. *Constitution Types in Delinquency* (International Library of Psychology, Philosophy, and Scientific Method.) London: Kegan Paul, Trench, Trübner & Co. 1932. Pp. viii + 266. 15s.
- Annual Report of the Smithsonian Institution, 1930*. Washington: United States Government Printing Office. 1932. Pp. xii + 650.
- AGOSTINO GEMELLI, O.F.M. *Il Mio Contributo alla Filosofia Neoscolastica*, (Seconda edizione, riveduta ed ampliata). Milano: Società Editrice Vita e Pensiero. 1932. Pp. 103. Lire Cinque.
- The Platonic Epistles*. (Translated, with Introduction and Notes, by J. Harward.) London: Cambridge University Press. 1932. Pp. xii + 243. 15s.
- SURENDRANATH DASGUPTA, M.A., Ph.D. *A History of Indian Philosophy*. Vol. II. London: Cambridge University Press. 1932. Pp. xi + 620. 35s.
- HERMAN FINER, D.Sc. *The Theory and Practice of Modern Government*. Two Vols. London: Methuen & Co. Vol. I. Pp. xiv + 740; Vol. II. Pp. vii + 814. 42s. the two vols.
- F. A. LINDEMANN, M.A., D.Phil., F.R.S. *The Physical Significance of the Quantum Theory*. Oxford at the Clarendon Press. London: Humphrey Milford. 1932. Pp. vi + 148. 7s. 6d.
- JOHN TULL BAKER. *An Historical and Critical Examination of English Space and Time Theories from Henry More to Bishop Berkeley*. Bronxville, N.Y.: Sarah Lawrence College. 1930. Pp. 90.
- JOHN LAIRD. *Hume's Philosophy of Human Nature*. London: Methuen & Co. 1932. Pp. ix + 310. 12s. 6d.
- CHARLES W. EVERETT. *The Education of Jeremy Bentham*. New York: Columbia University Press. 1931. Pp. xxii + 216. 16s. 6d.
- MARINO GENTILE. *I Fondamenti Metafisici della Morale di Seneca*. Milano: Società Editrice Vita e Pensiero. 1932. Pp. 92. Lire Dieci.
- J. L. STOCKS. *The Limits of Purpose and Other Essays*. London: Ernest Benn, Ltd. 1932. Pp. 303. 12s. 6d.
- ALEXANDER RAVEN. *Civilization as Divine Superman. A Super-organic Philosophy of History*. London: Williams & Norgate Ltd. 1932. Pp. 240. 12s. 6d.
- A. BOYCE GIBSON. *The Philosophy of Descartes*. London: Methuen & Co. 1932. Pp. xii + 382. 12s. 6d.
- BERTRAND RUSSELL. *Mysticism and Logic and Other Essays*. Seventh impression. London: George Allen & Unwin Ltd. 1932. Pp. vii + 234. 7s. 6d.
- W. H. CRAWSHAW. *The Indispensable Soul*. New York and London: The Macmillan Co. 1931. Pp. 315. 12s. 6d.

NEW BOOKS

- M. SILLS and E. S. HOLMES. *Values: a Philosophy of Human Needs*. Chicago: University of Chicago Press. London: Cambridge University Press. 1932. Pp. v + 136. 6s. 6d.
- SIR J. ARTHUR THOMSON, M.A., LL.D. *The Great Biologists*. London: Methuen & Co. 1932. Pp. viii + 176. 3s. 6d.
- J. B. BUTLER BURKE. *The Mystery of Life*. London: Elkin Mathews & Marrot. 1931. Pp. 158. 3s. 6d.
- Systematic Sociology on the Basis of the "Beziehungslehre" and "Gebildelehre" of Leopold von Wiese*. Adapted and amplified by H. Becker. New York and London: John Wiley & Sons. 1932. Pp. xxi + 772. \$6.
- S. E. STOKES. *Satyakama: or "True Desires."* Madras: S. Ganesan. 1931. Pp. xii + 416.
- Festschrift N. O. Losskij: zum 60. geburtstage*. Bonn: Verlag von Friedrich Cohen. 1932. Pp. xviii + 171.
- N. O. LOSSKY. *Freedom of Will*. (Tr. N. Duddington). London: Williams & Norgate Ltd. 1932. Pp. 150. 6s.
- D. S. ROBINSON, Ph.D. *An Introduction to Living Philosophy*. New York: Thomas Y. Crowell Co. 1932. Pp. xiv + 371. \$3.
- J. A. POTY. *Esquisse d'une Philosophie Sociale*. Paris: Librairie Félix Alcan. 1931. Pp. ix + 151. 12 frs.
- Les Philosophes Belges*. Louvain: L'Institut Supérieur de Philosophie de l'Université. 1931. Tome XI. *Henri Bate de Malines. Speculum Divinorum et Quorundam Naturalium*, par G. Wallerand. Pp. 237. 50 frs. Tome XII. *Siger de Brabant, d'après ses œuvres inédites*, par Fernand van Steenberghen. Pp. 355. 75 frs.
- MAURICE D'ALTA. *La Vie des Hommes*. Paris. Nlles. Éditions Argo. 1931. Pp. 254. 15 frs.
- Anthologie des Philosophes Français Contemporains*. Paris: Éditions du Sagittaire. 1931. Pp. 533. 30 frs.
- ALBERT BAYET. *La Morale de la Science*. Paris: Les Presses Universitaires de France. 1931. Pp. 139. 10 frs.
- HENRI SÉE. *Science et Philosophie d'après la doctrine de M. Émile Meyerson*. Paris: Librairie Félix Alca. 1932. Pp. 203. 15 frs.
- M. COMBES. *Le Rêve et la Personnalité*. Préface de Andre Lalande. Bibliothèque de la Revue des Cours et Conférences. Paris: Bovin et Cie. 1932. Pp. xii + 264. 20 frs.
- C. REVEL. *Le Hasard, sa loi et ses conséquences dans les sciences et en philosophie, suivi d'une esquisse sur les Facultés humaines et d'un essai sur la Métempychose d'espèce*. Paris: Durville. 1930. Pp. 550.
- KARL JASPERS. *Philosophie*. Three Vols. Berlin: Verlagsbuchhandlung Julius Springer. 1932. Vol. I. *Philosophische Weltorientierung*. Pp. xi + 339. RM. 8.80 and 10.60. Vol. II. *Existenzerhellung*. Pp. vi + 441. RM. 11.40 and 13.20. Vol. III. *Metaphysik*. Pp. vi + 237. RM. 6.60 and 8.40.
- Z. LUBIENSKI. *Die Grundlagen des ethische-politischen Systems von Hobbes*. München: Verlag von Ernst Reinhardt. 1932. Pp. 303. RM. 12 and RM. 14.
- DR. OTTO KANT. *Zur Biologie der Ethik*. Wien: Verlag Julius Springer. 1932. Pp. 160. RM. 8.80.
- ERNST BERGMANN. *Erkenntnisgeist und Muttergeist eine Soziosophie der Geschelechter*. Breslau: Ferdinand Hirt. 1932. Pp. 448. RM. 7.50.
- PHILIPP FRANK. *Das Kausalgesetz und Seine Grenzen*. Wien: Verlag von Julius Springer. 1932. Pp. xv + 308. RM. 18.60.

CORRESPONDENCE

TO THE EDITOR OF *Philosophy*

DEAR SIR,

By a lamentable sin of omission or commission I have let a number of copies of the *Proceedings* of the Seventh International Congress of Philosophy go out to members of the Congress with a note against the name of Professor S. Alexander referring to the footnote "Since deceased."

Professor Alexander is, of course, happily still with us.

I owe to him and to the philosophical public—which is his public—a sincere apology, and I very much hope that no one has been taken in by the misinformation.

The note was, of course, intended to be attached to the name of Dr. Wildon Carr, whose death we so much deplore.

Yours sincerely,

CHRIST CHURCH, OXFORD,
December 1931.

GILBERT RYLE,
Editor of the *Proceedings*.

TO THE EDITOR OF *Philosophy*

MR. B. M. LAING AND THE SECONDARY QUALITIES

SIR,

In *Mind and Matter*, Mr. G. F. Stout says that, according to the traditional view, the secondary qualities do not qualify matter. Mr. B. M. Laing, who reviews this book in the current number of *Philosophy* (January 1932), questions Mr. Stout's statement, alleging that Locke "certainly" held that the secondary qualities *do* qualify matter.

It is true that in the special sense in which Locke used the name "secondary qualities" (as meaning the powers of objects to produce colours, sounds, tastes, smells, etc.) he did hold that they qualify matter. But, though true, the point is irrelevant to Mr. Stout's statement. What is important is that in the common usage of the name (as meaning the qualities colour, sound, taste, smell, etc., themselves, *not* the powers of objects to produce them) Locke clearly denied that the secondary qualities qualify matter. Mr. Stout makes it perfectly plain that he adopts the common usage of the name—and, incidentally, that he is well aware of Locke's different usage. Hence he is fully justified in including Locke among those who hold what he calls the "traditional" view.

It is perhaps curious that the name "secondary qualities" should now be commonly used in a sense quite different from that in which it was used by Locke, who was the first to employ it. But we must not suppose that wherever there is a difference in the use of words there is a difference in doctrine. The view that the secondary qualities do not qualify matter is precisely Locke's view, though Locke expressed it in different language.

Mr. Laing also says that Descartes probably held that the secondary qualities qualify matter. Where shall we find any evidence that Descartes (except when "judging inconsiderately") ascribed colour, sound, taste, heat, etc., to material things? Not, one imagines, in the sixth of his *Meditations*, or in the second or fourth part of his *Principles*!

I am,

THE UNIVERSITY, ABERDEEN,
January 5, 1932.

Your obedient servant,
REX KNIGHT.

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INSTITUTE NOTES

SUMMER Term begins on April 27th, and ends on June 29th.

"THE FOUNDATIONS OF MORAL VALUES," a course of six weekly lectures by PROFESSOR J. H. MUIRHEAD, LL.D. (Fellow of the British Academy), on Wednesdays, at 5.45 p.m., at University Hall, 14 Gordon Square, London, W.C.1, beginning April 27th. The lectures are free to members. For non-members of the Institute the fee for the course is 12s. 6d.

NEW CENTRE OF THE INSTITUTE AT MANCHESTER

The inauguration of a new centre of the Institute at Manchester took place in the History Theatre of the University of Manchester on February 5th, when the President, the Rt. Hon. Sir Herbert Samuel, G.C.B., G.B.E., M.P., gave the address. Professor S. Alexander was elected Chairman of the Centre, and Professor J. L. Stocks its Honorary Secretary. We wish the new centre great success in the work it proposes to begin in the autumn, and hope it will secure a large membership. With such distinguished officers at its head, the Manchester Centre is pretty certain to make a name for itself, and prove an inspiration to other cities.

OBJECTS OF THE INSTITUTE

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Those desirous of becoming members of the Institute are invited to apply for further particulars and forms of application to The Director of Studies, University Hall, 14 Gordon Square, London, W.C. 1.

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HARTMANN PRIZES

Two Prizes of £50 each have been offered by a member of the British Institute of Philosophy for the best Essays on Nicolai Hartmann's ETHICS (English Tr. published by George Allen & Unwin Ltd., London) under the following conditions:—

1. One prize to be open to men and women of British birth, wherever resident, under the age of 28; and one to men and women of American birth, wherever resident, under the age of 28.
2. The Essays shall be of not less than 100 typewritten quarto pages.
3. They must be sent in before June 1st, 1933, addressed to the Director of Studies, The British Institute of Philosophy, University Hall, 14 Gordon Square, London, W.C.1, with addressed stamped envelope enclosed for their return to the writers.
4. The prizes shall only be assigned on condition of the attainment of a certain standard by the selected Essays.
5. The selection shall be made by the Academic Committee of the British Institute of Philosophy.

J. H. MUIRHEAD,
Chairman of The
British Institute of Philosophy.

UNIVERSITY HALL, 14, GORDON SQUARE
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June 1932